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Journal of Horticulture.

THURSDAY, JULY 4, 1901

Fruit Thinning.

It is one of the unaccountable phases of practical gardening that so few systematically reduce the fruit on hardy trees to a crop within the capacity of the tree to perfect. Peaches and Nectarines are the two fruits that one may say with safety are always duly thinned; next to these Apricots, and all the rest are left to Nature. It is the object of this short note to indicate the main evils resulting from this practice, and the benefits that invariably follow the reduction of crops to proper limit.

First of all, however, there is the bugbear of labour to be disposed of; where or how can time be spared at the busiest season of the year to examine carefully every tree on walls and in the open quarters, and remove superabundant fruit? In practice this is happily not so very difficult, and in the majority of gardens, taking an average of years, and one fruit with another, something like three hours is sufficient time to thin all the trees of each species. Apples, of course, require a longer time, but in the case of these the fruit is not all ready at once, so that two or three weeks can be allowed to intervene between the time devoted to the work. This applies equally to other fruits. Apricots are ready to manipulate long before any other fruit, then come Plums and Pears, followed by the Apple. In practice, therefore, a few morning or evening hours set apart to each kind of fruit enables a practitioner, who knows what he wants to do, to attain his object without having to worry over a waste of time; and in connection with this it must be remembered that the labour of gathering the crop is considerably lessened by an outlay of a little extra work at the thinning stage. The evils of over-production, though apparent, are, I am afraid, too often unnoticed. The fruit itself is always under-sized and of poor quality, not infrequently unuseable. The trees are weakened, and their powers of bearing lessened, sometimes so



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much so that one or two seasons immediately succeeding a "big" crop are remarkable for no crop at all. Diseases also are induced.

The benefits accruing from proper thinning, on the other hand, are, to those who have never experienced them, a matter of faith while untried. They are, however, none the less real. Fruit is improved in size and also in quality. None of it need be wasted on account of worthlessness, and in the matter of late-keeping Apples the fruit passes the months of waiting in the store room comparatively free from the troubles that carry off small and ill-matured fruit. The trees on their part, never burdened beyond their powers of production, respond annually to Nature's stirring, and provide each year, with few exceptions, their quota of fruit. And it is a curious result of attention in this matter that trees carefully thinned of fruit show a less tendency to produce what are called extraordinary crops than those left to themselves. They, in fact, become more domesticated, more subject to rule, and fit themselves to the conditions forced upon them.

Now, as it is never too late to mend, so is it never too late to thin overburdened fruit trees. At the same time, the best results follow the removal of the superfluous fruit while yet small. Then we not only secure to that left to mature the fullest size the nature of the season permits, but the tree is kept in exuberant health and in a fit and proper condition to form the right sort of buds for the crop of the following year. Broadly speaking, up to the period of stoning, in the case of drupaceous fruit, both the tree and its crop is benefited by the operation. After that process has been completed, an over-heavy crop has already weakened the tree beyond its power to make good the same season, but a reduction of the fruit has a beneficial effect on that left. With regard to Apples and Pears there is room for a greater degree of laxity, for experience proves that up to a late period superfluous fruits may be advantageously removed.

So marvellously do Apples respond to thinning, that in the case of early sorts it is possible, though perhaps not always judicious, to keep thinning and using the larger fruits from the time they are fit, and finally to leave a fair crop of the smallest to swell. The crop is, of course, much later in maturing; I have had Lord Grosvenor, for instance, keep on swelling till the end of October. Pears, it is perhaps needless to say, do not respond in the same way. It may be thought that a judicious lessening of the numbers of the larger Apples and Pears would practically meet the merits of the case. As a matter of fact the best results are obtained in the case of the smaller late kinds.

Such a delicious Pear as Winter Nelis, for example, when vigorously thinned, not only in its fruit receives a large access of bulk, but the quality is very much better. So with the eating late Apples, Duke of Devonshire, King of Pippins, Cox's Golden Pippin, Claygate Pearmain, Beachamwell, and others of that class, if severely thinned, are improved to a really extraordinary extent. In the north some of the smaller fruited varieties, which are hardly worth harvesting when grown without thinning, become really useful after due attention in that matter.

How many ought to be left to secure these ends? To answer that would entail a large discussion. A safe rule to follow, however, is to err on the side of undercropping. It is perhaps necessary, if the season proves a less than ordinarily good one, and in all kinds of seasons it is to the advantage of the trees. A fair crop properly distributed year after year is more than sufficient for all the requirements of any private establishment. Thus there is no good reason for greediness in trying to obtain very large crops, while on the other hand there is every inducement to produce annually an average crop of high-class fruit.—R. P. BROTHERSTON.

Hardy Flower Notes.

As though June ne'er before
Had filled her lap with Roses.

BUT a few days ago one felt tempted to agree with the title of Theodore Watts' sonnet "Natura Maligna," for the fierce north-west wind which sweeps down the side of the mountain near by, and which is our most destructive one for the flowers, was raging with even more than its usual vehemence, and with more prolonged duration than usually occurs. It was pitiful to see the taller plants struggling to hold their own, and to see them and the shrubs and trees being greatly despoiled of the freshness of their foliage, so that one felt as if one was at the mercy of some unbeneficent power for the time. Leaves were blackened, and the beauty of some things taken away for the rest of the year. Magnolia conspicua, which looked so pretty even without a flower, has lost a number of its fine leaves, and many more from others were blown about, the old Lilac tree having quite a hecatomb of such wind-riven leaves all about its base. Now, however, it is no longer "Natura Maligna," but Natura Benigna, for rain has come, the wind has changed, and freshness and bloom once more appear. The Rose buds have become Roses, and we are revelling in the full enjoyment of

these gracious flowers, and feeling as if we had never seen such a sight before. It seems as if we were to have a good Rose season here, for they are blooming with great freedom, both singles and doubles. William Allen Richardson on the house gable is finer in colour than usual; the pillar of Longworth Rambler is both full of blow and is giving better bloom than is usual here; and Alister Stella Gray, generally late here, is blooming much earlier than is its wont in this garden. But "Mr. Raillem" and other rosarians will think I am going too far if I say more about my few Roses, which are, in truth, grown as "garden Roses" purely and simply, and include too many "species" to find much favour in their eyes.

Irises have also done well, and I must thank Mr. Brotherston for his welcome article on the Fleur de Lys, which recalls so many interesting things about this fine flower. One would like now, however, to say a word for the pretty white Siberian Iris, *I. sibirica alba*, which finds but little recognition nowadays. A good clump in bloom in my front garden looks well, and is appreciated by more than myself for its small but shapely blooms. The white variety is even prettier than the type, although there are tints about it which would refute any claim it might make to being absolutely white. There is, however, so much of it about the groundwork that the little marking and the few other tints about the base of the falls only serve to make the flower the prettier, though we should appreciate a variety from which all these were eliminated, and only pure white remained.

Rather a fine Geranium is that introduced by Max Leichtlin, as we appreciatively call the floral savant of Baden-Baden, as *G. grandiflorum*. It reminds one much, it is true, of our own *G. pratense*, but it has better flowers of much the same shade of blue, and its foliage is prettier by far; there is a deeper shade of green about them, and they partly assume, as well, a few nice tints of red and yellow, such as we may see on *G. pratense* at the autumn, but not till then. At the same time, I question much if we would not deceive one of the best of our botanists if we submitted a piece of *G. grandiflorum* to him for name; I fancy he would say, "*G. pratense*, unmistakeably."

There is so much of the pleasure of a garden yielded by watching new flowers coming into bloom, that one must not always feel aggrieved if the expected swans prove geese after all. If we seek novelty we must pay the price, and part of it is the disappointment which falls to our lot if the flower does not come up to expectations. I am feeling rather sore about such a disappointment with a plant I found in a nursery under the name of *Silene Requiemi*, and which was sent to me safely in a pot, and has been watched with particular attention, and guarded with peculiar care. I make no complaint about the vendor, who did not even recommend it, but left me unsolicited to buy this or that. Well, it has bloomed, and the result belies the fine fat buds, which promised a good flower. A small white flower with an inflated calyx will serve for a description, though the neatness of the plant made one expect a superior alpine flower.

Such a disappointment only serves to heighten one's pleasure when we have a really good find among these new plants, and such I have had with *Veronica filifolia*, one of the prettiest little plants it has been my good fortune to see for a long time, though there is some dread mingled with the enjoyment, that the plant may either be an annual or may be rather tender. It came to me from France, and has been in flower for nearly a month, I should say. It is probably *V. filiformis*, an Asia Minor plant; it is of dwarf growth, not being more than 9 inches high. The flowers are those of our Germander, but are white lined with lilac, which is deeper on the upper than on the side petals, which again are deeper in their lining than the lower one, which is almost unmarked. The leaves are so narrow as to be well described by the specific name *filiformis* or *filifolia*. I hope to have a favourable report about it for another June, if all go well.

Then *Campanula persicifolia* Moerheimi bodes well to justify the encomiums it received last year when it was shown in London. Sometimes a plant shown well at an exhibition is not of much value as a garden flower, where it has to adapt itself to the vicissitudes of gardens where special care cannot be given to everything, and where flowers find their level better than when they have been expressly cultivated for the public eye. The Moerheim Bellflower is really a good thing, with its pure white flowers of much size and substance. Our old double white form of *C. persicifolia* is not so perennial in some places as it ought to be, but the Moerheim one should supersede it where such flowers are in demand. But there are many other things, so many, indeed, that one feels as if the month had never before filled that lap so full, not only with Roses, but with other flowers as well. Sweet Pinks, no less fragrant double Rockets; queer, but pretty, *Astrantias*; tall and miniature *Campanulas*, bright Sun Roses and Rock Roses as well; exquisite *Violas*, white and coppery and purple *Mulleins*; Poppies, not all "black-hearted," as the poet called them; pretty *Heucheras*, "*Fraxinellas*," perennial Peas, *Orobuses*, glowing *Eschscholtzias*, even a Lily or two, as if to keep up the old challenge to the Rose. The wealth of June is spread out before us, and we are welcome to partake of the riches of Flowerland, so freely and so fully displayed.—S. ARNOTT.



Odontoglossum crispum Sanderæ.

AMONGST the many beautiful forms of *Odontoglossum crispum*, the variety named *Sanderæ*, sent out by the St. Albans firm, maintains a prominent position. A first-class certificate was awarded to it seven years ago, since when it has probably spread to many collections. It is one of the handsomest of the heavy spotted section, the blotches and spots being brown. Our figure of it shows the character.

Grammangis Ellisi.

A MADAGASCAR Orchid, with handsome half-drooping racemes. A plant grown in a basket among sphagnum and peat, in the Cyripedium and Phalænopsis house at Kew, is at present in flower, and at its best. The stout, fleshy raceme bears twenty-nine flowers, which resemble the individual flowers of *Cymbidium Lowianum*. The colour of sepals is deep bronzy gold edged reddish brown; the lip and petals are very small, the latter having beautifully recurving tips. It is a handsome, though not brilliant Orchid, and was brought to Kew in 1893.—K.

Orchids in Baskets.

Many Orchids have a very pretty effect when grown in baskets that is lost when they are cultivated in pots in the usual way. Those with pendulous flower spikes are, of course, the most suitable, but there are others that look well when in flower, as the blossoms have a finer effect when on a level with the line of vision, or slightly above it, than when looked down upon. For instance, the *Dendrochilums*, or *Platyclinis*, as they are more correctly termed, never look so well as when growing in baskets, the pretty arch of the racemes of such as *glumaceum* being well shown up; and these do well under basket treatment, their proximity to the light being all in favour of the growths finishing well in late autumn. Another grand Orchid for baskets is *Odontoglossum citrosum*, its beautiful spikes of flowers always taking an exact downward direction. This plant is often exhibited grown in pots or pans with the spikes tied to stakes, but it loses its beauty shown this way, while if allowed to hang over the edge of the stage in a group, as I have sometimes seen it, the flowers are apt to be rubbed by the knees or handled by the fingers of spectators. Grown in baskets suspended from the roof, or raised on light pedestals, it is exquisite.

Nearly all the deciduous *Dendrobiums*, again, are perfect for basket culture. Take *D. chrysanthum*, *D. Wardianum*, *D. crassinode*, or *D. Devonianum*, and tie them up; they are not half as pretty as when allowed to grow at will, first upright, or nearly so, and then by their weight gradually assuming a horizontal or pendent position. The flowers take their natural pose on the stems, and each one looks at you, so to speak; tie them up, and they never again assume their place, as after a flower has opened the power of twisting its pedicel is gone.

Acinetas and *Stanhopeas* are, of course, purely basket Orchids; the flower spikes burrow through the compost, and would be lost entirely if grown in pots. Many *Masdevallias*, again, such as *M. Chimæra* and its varieties, have their beauties hidden if growing on a stage in pots, but put them in baskets and keep them up, then their quaint structure and beautiful colouring is easily seen. These are only a tithe of the plants that may be so grown, as, besides looking well, there are many plants that thrive in baskets better than in any other receptacle. And it is noteworthy that a plant that has for years been sickly and pining in a pot, will often, when placed in a basket, return to health and vigour.

Aërides, *Vandas*, and *Saccolabiums*, for instance, often throw out side bracts, and these are taken off and potted. Being smaller they are often placed away from the light, and suffer accordingly. Replanted in baskets they soon regain strength and vigour. Of the different kinds of baskets little need be said. For all ordinary purposes that made of teak rods is most satisfactory. For *Stanhopeas* and *Acinetas* baskets made of copper wire are excellent, as the larger spaces or meshes allow a free passage for the flower spikes.

One of the chief difficulties in growing basket Orchids is that of placing them into a new receptacle when the old one decays. From the smooth sides of a pot the roots slip fairly easy, but if they are much entwined about the rods of a basket it is different, and any attempt made to forcibly remove them will end in their being torn and broken. The best plan is to take a fine-toothed saw, such as is used by cabinet makers, and cut through the rods at each corner, removing them piecemeal. The very best quality of compost should be used in baskets, and it should be as firmly placed as possible. The best method of watering baskets is by dipping, as this insures a thorough soaking of the compost, changes the air, and is very disturbing to insects.

Oncidium concolor.

I know of few more beautiful Orchids than this delightful dwarf species when it is really well grown. The bright chrome yellow of the flowers and the elegant pose of the drooping racemes make a very pretty picture, and never fail to elicit praise, especially from ladies, who usually have good taste in such matters. The culture of the plant cannot be called difficult, yet it is surprising in how few places the most it is capable of is obtained. In some cases it is grown too poorly with insufficient compost, in others insects are allowed to infest it to its detriment, while some few cultivators still cling to the idea that any and every Orchid requires heat, and consequently grow it in an unsuitable atmosphere.

The truth is, all these dwarf growing subjects are easily incommoded by checks that are too slight to injure more gross growing, stouter plants, and a constant succession of such checks will make it very difficult to keep them in health. *O. concolor* during the growing season requires a large amount of atmospheric

moisture, and from now onward until September it is practically impossible to keep the plants too cool. If the requisite cool moist conditions are maintained the plants will be found on entering the house in the morning covered with a fine dew. Early morning ventilation will soon dry this off, and these conditions are very refreshing to them after the heat of a summer's day.

The best receptacles for *Oncidium concolor* are small pans for suspending, or baskets. Personally I prefer the pans, as it is easier to maintain a constant moisture about the roots than with baskets, but with reasonable care either may be used. Three parts of sphagnum moss to one of peat fibre will suit it well for compost, the largest plants only needing an inch and a half or so of this mixture over abundant drainage. Finely broken crocks should be added to the peat and moss, and in finishing the compost let it be just level with the base of the bulbs and rise a little from the rim of the pan.

When repotting is in progress all the old and decayed bulbs should be removed, while with ordinary care all decomposed matter and sour peat may also be got away without much disturbance of the sound and healthy roots. Like many others of our popular plants, *Oncidium concolor* was very rare for a long time after its introduction. It first flowered in the Duke of Bedford's collection in 1840, but not until some thirty-five years later did Messrs. Veitch receive large supplies of it, which, with subsequent importations from its habitat on the Organ Mountains, have made it plentiful.—H. R. R.



ODONTOGLOSSUM CRISPUM SANDERÆ.



Notes on Chrysanthemums.

PLACING the main stock of plants in their flowering pots, as well as those which have been cut down and are now breaking into growth, claims the attention of growers at the present time. The largest plants and the strongest rooting varieties should be dealt with first, these, of course, becoming root-bound the soonest. They must be thoroughly well moistened before potting, especially those plants which have formed a compact mass of roots, and are in a measure somewhat pot-bound. Such as these will materially suffer later on if placed in the pots with the soil and roots dry. It is best to emphasise the importance of this, as to endeavour to moisten plants after the final potting leads to undue saturation of the new compost, and washes out much of its fertility before new roots have had time to enter it. The plants, too, should be thoroughly free from insects, black or green fly being the chief pests now prevalent. To destroy them lay the plants on their sides and syringe with a softsoap and tobacco solution, or dip their infested points in a similar solution. Dusting with tobacco powder will destroy them, afterwards syringe with clear water.

The compost for the final potting should be of a substantial character. Good turfy loam, in the proportion of three parts to one of decayed manure and one of leaf soil, is good. Add to this half a part of pulverised mortar rubbish, and a quarter of wood ashes and silver coarse sand. Soot is of much value in improving the compost, but must not be used too freely. A 6-inch potful to a bushel of soil is sufficient. Use also the same quantity of bone-meal. Thoroughly incorporate the ingredients by mixing several times, and bring it to the proper state of moisture by sprinkling with water as the mixing proceeds.

The most suitable sized pots for blooming the plants in are 8 and 9-inch pots. Some of the weaker growers and small plants may have 7-inch size, while a few of the strongest growers and largest plants may have 10-inch pots, or two plants from small pots can be arranged together in the latter size. On turning out the plants for potting, take away the drainage crocks at the base and loosen a few of the roots at the sides especially if more than ordinarily pot-bound. Drain the pots carefully, but not too liberally, and cover with fibrous portions of the compost. Over that a slight dusting of soot tends to keep away worms, and acts as food material for the roots when later on they push down to it. Introduce soil to the required height for arranging the ball of roots upon, making it fairly firm. The loose roots should be spread out in a careful manner; place the soil round the ball in layers, and make each firm with a potting stick. Ample room must be left to supply water, and the furnishing of a top-dressing of rich material in early autumn to encourage surface roots. At the time of potting place a stake to each plant.

The treatment accorded to cut-down plants nicely breaking into growth may be the same as for tall specimens. Limit the number of growths upon them to about four of the best. Arrange the pots on a firm ash bed, or in lines on boards; give no water at first, but syringe the plants daily. In a few days, however, should the weather be sunny, a copious watering will be necessary, as flagging of the foliage must be prevented. When the growth becomes established and free arrange the plants permanently for the summer.—S.

Early Flowering Chrysanthemums.

OUTDOOR early flowering varieties of Chrysanthemums are making good growth where they were planted in May. Remove very weakly growths, and maintain the soil clean and free from weeds. It is not necessary to keep constantly watering such as are well established. The later planted may require copious supplies at intervals until established should the weather be hot and dry.—E.

Amorphophallus titanum at Kew.—For the first time since 1889 a flower of this remarkable Aroid has been produced at Kew. The present specimen will be found in the Victoria Regia house. The flower of 1889 (the first ever seen at Kew) was 5 feet long to the tip of the spadix, the spathe being 3 feet long and 4 feet across. The tuber weighed 57 lbs., and was 6½ feet around. The inflorescence of the present plant reaches 4 feet high. The first records of the plant were published twenty-three years ago by a Dr. Beccari, who found the Aroid in Sumatra. The leafstalk of this wonderful plant has been known to grow 17 feet high, with a "leafage spread" of 45 feet round. There is a picture of the plant on the ceiling of the Wood Museum at Kew.

Notes on Figs Under Glass.

Second Crops.—The fruits on early forced trees have now swelled to a good size, and in order to secure a number of fine Figs they must not be overcropped, keeping the foliage free from insects, and feeding the roots liberally. Early forced planted out trees should have the young wood ripened and be resting by the middle of October, there not being anything like a good rest for Fig trees. Borders that have become dry, or inclined that way, must be watered to bring them into a moist condition down to the drainage. Liquid manure will be required by trees having the roots in borders of limited extent. Mulch lightly, not more than an inch deep, and keep damped when it becomes dry, so as to encourage surface roots. Syringe daily, except in cold weather, when morning or early afternoon syringing will be sufficient to keep down red spider, but if it gets a hold destroy by means of an insecticide. Maintain a night temperature of 60° to 65°, and 70° to 75° by day. Ventilate early, especially on bright mornings. Keep the house through the day at 80° to 85° with sun heat, and close sufficiently early to run up to 90° or even 95°, providing plenty of atmospheric moisture.

Succession Houses.—Where the fruit changes colour, afford more air, insuring a circulation constantly. Reduce the moisture gradually, keeping it from the fruit, as with this ripening "spot" is very liable to present itself at the apex. The fruit cannot be exposed too much to the influence of light and air in order to insure high quality. Lessened supplies of water at the roots tell in favour of high quality; yet they must not be allowed to suffer for lack of it. Trees swelling their crops will be benefited by a light mulching of short material over the roots, and through this supply liquid manure in the case of trees carrying heavy crops of fruit. In fine weather syringe twice a day, always in good time, and close so as to run up to 90°, 95°, or 100°. As the fruit approaches ripening provide a little ventilation before nightfall, and let it remain, increasing it early.—GROWER.

Melons.

PLANTS swelling their fruits require liberal supplies of water, and copious, but not overdoses, of liquid manure; all points considered, there is not any better than the drainings of stables and cowhouses, adding to each gallon of neat liquid 4 ozs. of superphosphate of lime, and diluting with five times the bulk of water for use; failing this, Peruvian guano, 1 oz. to a gallon of water, is excellent for feeding purposes, and also for charging the hot-water pipe troughs, or damping the house occasionally in the evening, but not using more than a gallon to about 7 square yards of floor, bed, or wall surface. Light top-dressings of the advertised fertiliser are also excellent, adding fresh soil to the ridges or hillocks as the roots protrude, and always warmed. I like this old-fashioned plan, as the plants are always kept well in hand, and there is no occasion to employ more compost than is absolutely necessary, a point of some importance where loam has to be purchased. To concentrate the energies of the plant on the fruit the laterals should be pinched at each joint or two of growth. By syringing in the morning and early afternoon, and damping well down before nightfall, red spider will be kept in check. Mildew and white fly are best subdued by brushing a little sulphur on the hot-water pipes, and heating them to over 170°; and aphides by fumigating. Canker yields to timely rubbing with quicklime.

Of all Melons I consider the highest quality are produced in frames. The rage, however, is all for hot-water heating. Still, where there are frames and fermenting materials at command they should be utilised, though this is the age of "drift" rather than of utilisation. Young plants recently put out will give useful fruit in August or September. It is well to train the plants with four shoots, two being taken to the front and two to the back of the frame, keeping the laterals rubbed off to about 6 inches from the stem, and pinching the main shoots when 12 to 15 inches from the sides of the frame. The laterals will show fruit at the first or second joint, and the flowers being fully expanded fertilise them about noon on a fine day, leaving a little air on constantly to prevent the condensation of moisture on the blossoms, a moist, close atmosphere being fatal to a good set. Sprinkle the plants in the afternoon of fine days with clear soft water, closing about 3.30 P.M. to 4 P.M., or so early as to raise the temperature to 90°, 95°, or 100°, and ventilate early in the day, or from 7.30 A.M. to 8 A.M., keeping through the day at 80° to 90°, and reduce the ventilation gradually. A sharp look-out should be kept for aphides. Red spider will not appear if the plants are kept properly moist. Be careful to keep water from the collar of the plants, as it conduces to canker. If this appears on the stem rub quicklime into the affected parts until they are quite dry, and repeat as occasion requires. Under the foregoing conditions excellent fruit may be looked for in due time, and they will be found very useful for dessert.—A.

Diseased Tomatoes.

THE plants are infested by the sleeping disease fungus, *Fusarium lycopersici*, and first indicated by the dull colour of the leaves, which commence to droop, and is followed by a collapse of the stem. If the plants are not attacked until the fruit is present this frequently ripens, and may not bear any traces of the disease, even when examined microscopically, though in some instances the fruit is diseased and ripens irregularly; this irregularity of ripening is probably not due to the fungus, but to a deficiency of potash, at least a supply of sulphate of potash applied some time in advance, or early in the stages of growth, causes the fruit to ripen more satisfactorily and evenly. The root is invariably attacked first, though your plant root-stem is free from the fungus, the root-stem being attacked at the point just level with the soil or lower portion of the stem. Its presence is indicated to the naked eye by a brown discolouration of the vascular bundles when the stem is cut through, and then the plant droops, or "sleeps." On the stems just above the ground appears a very delicate white mould, consisting of conidiophores bearing conidia or spores at the tips of their whorled branches. This is the first or *Diplocladium* stage, which is quickly followed by the second, or *Fusarium* condition, and is borne from the same mycelium as that producing the *Diplocladium*, its spindle shaped curved spores being produced in great numbers.

Neither by *Diplocladium* nor *Fusarium* spores is inoculation of Tomato plants effected, but both produce a mycelium in the ground, and this is the mode of infection, the mycelium in the ground producing a third form of fruit, known as resting spores. These remain dormant for a season, and then germinate, forming a mycelium capable of attacking the roots of Tomatoes. By this means the disease is communicated to a new crop of Tomatoes the following season. Thus the fungus commences life, or its continuation, as a saprophyte, and afterwards becomes parasitic. It is clear, then, that prevention must be directed to the destruction of the saprophytic existence by timely applications of lime or basic cinder phosphate, half free lime, about 1 lb. of lime or 2 lbs. of basic cinder phosphates being applied per square yard, and dug in or mixed with soil placed about 1 foot deep, and after digging in, taking small spits to insure even mixing of the lime or basic cinder phosphate with the soil, sprinkle on the surface half a pound of kainit per square yard, and leave there. This should be done in the autumn or early winter, and in spring, or shortly before planting with Tomato plants, dig over or mix, as the case may be. The intention is to destroy the mycelium of the fungus in the soil, and supply nutriment to the Tomatoes. Affected plants should be removed upon the first appearance of the disease, and the soil mixed with quicklime. The drenching of the house, walls, &c., after the diseased crops are cleared, with a solution of iron sulphate, is also good practice. The iron sulphate solution may be made as follows:—Water 50 gallons, sulphuric acid 1 pint, iron sulphate 25 lbs.; pour the sulphuric acid upon the iron sulphate in a barrel, a metal vessel must not be used, and then add the water by degrees. This is intended to destroy the spores and prevent the saprophytic existence of the fungus. Seed only from clean plants should be used, for it is well known that seed obtained from diseased plants produces diseased seedlings.—G.

Early Peas.—Mr. James Baxter, market gardener, Millerhill, Edinburgh, sold at the Waverley Market on the 22nd twenty-five hampers of extra good, well filled, early Peas. The variety was Tillie and Turner's Select First Early, a well-known favorite with market growers around the Scottish capital.

Early Potatoes.

A MATTER of considerable importance to a young gardener taking his first charge is the selection of suitable varieties of vegetables. Not only has he to select sorts well known to possess good qualities, but they must also be suitable for the soil of the locality. This latter applies with especial force to Potatoes, many sorts that thrive well on a suitable soil refusing to crop on others. With regard to the earlier crops, the borders on which they are grown are usually prepared specially for them, but even then there is no real alteration in the

staple, though by additions heavy soils are made to work better, and light ones more holding. There are plenty of varieties to select from among the early Potatoes; too many, in fact, for those who do not know the peculiarities of each. For flavour and average cropping qualities the Ashleaf section, in my opinion, stands unrivalled. Unfortunately they are not sufficiently early for the first crop, though one of them, the Hammersmith Kidney, is not far behind in this respect. On a heavy, cold soil, this did well with me, and though the crop was not a heavy one it more than made up for this in quality. Rivers' Ashleaf is also good, but not so vigorous as Hammersmith, and more suitable for frame culture and forcing owing to its small top.

The newer Ninetyfold is a grand Potato in every way, an immense cropper, not liable to disease, and of as good quality as any at its season. I grew Sharpe's Victor for some time after this was sent out, but eventually discarded it for the newcomer. There are so many spurious stocks of Sharpe's Victor on the market that it is often difficult to obtain the true form with small dark haulm and smooth shapely thin-skinned tubers, but this is the only one worth growing. Ringleader, again, is a fine early sort, bearing tubers very even in size and of excellent quality. This, too, is dwarf and compact in habit, vigorous enough to ward off disease until late in the season, and, taken altogether, very difficult to beat.

Where there is a heavy demand, and the ground at command is limited, it is sometimes difficult to keep the supply going after the first earlies are over. Syon House and Duke of York come in capitally here, as do some of the second early varieties lifted before they are really ready. Early Rose, for instance, and Reliance Kidney are good, both producing heavy crops, but naturally not of the best quality when lifted thus early. Still, anything is better

than a break in the supply, and possibly other readers may assist with the names of those that do well with them.—H. RICHARDS.



ROSA POLYANTHA GRANDIFLORA. (See Page 10).

United States Apples.—The statement that the value of the Apple crop of the United States is greater than that of its Wheat production may be a surprise to many. Thus it is stated that the total yield of Apples in 1900 was 215,000,000 barrels. Supposing that an average price of 2 dols. a barrel was obtained, the aggregate value of the crop was 430,000,000 dols. The average value of Wheat is but a little over 300,000,000 dols. annually. By this estimate the Apple crop is worth about 50 per cent. more than the Wheat. The export of Apples exceeds 4,000,000 barrels a year, but it is increasing. The price abroad ranges from 2 dols. to 4 dols. a barrel, the most of the fruit bringing nearer the larger price.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

IN recent notes attention was directed in these columns to the newer varieties of Wallflowers, Aquilegias, Myosotis, and Pansies offered at this time by Messrs. Sutton & Sons of Reading. Certain firms have within recent years devoted skill and patience to hybridising Poppies, particularly *Papaver orientale*, the great scarlet perennial Poppy. The Reading House has assisted in this hybridising work, and in their grounds the visitor will see a varied strain of these border plants. These novelties are here denoted as Sutton's Perennial Hybrids. They are all like the parent type—that is, the scarlet Oriental Poppy, only that the colours vary; some are blush, others lilac hued, and on through white, orange, and deep ruby. The more distinctive sorts are magnificent acquisitions for the flower borders in May.

At Sutton's.

Those who can visit the Reading grounds this month will see 600 trials of Sweet Peas. The Cupid type, the perennial Lord Anson's blue, and the new and old varieties of the Sweet Pea, are all present for comparison. A hurried tour over the 70 acres of "Farm" nursery brought to my notice such attractive hardy plants as Verbenas in variety, but especially the Miss Willmott, with bright rose-pink flowers; dwarf alpine Phloxes, Delphinium Queen of Blues (elsewhere named Butterfly); *Silene "Rose,"* which produces lovely rose flowers early in spring from an autumn sowing. It contrasts well with *Nemophila insignis*, and can be commended to those who furnish spring beds. *Alyssum saxatile citrinum* has much softer coloured flowers than the *A. saxatile*, and to my mind is more pleasant to look upon; it is equally prolific, and lasts for many weeks. I was particularly pleased with the selection of *Salpiglossis* that can now be obtained, and which are here grown. They embrace a great diversity of colours, the flowers being large, bold, and exceedingly beautiful. In place of the few patches of these that are usually sown in gardens there ought to be square yard after yard. Begonias for bedding, also Antirrhinums, Polyanthus, Primroses, and all the most brilliant and useful classes of early flowering plants, each of which are carefully being improved by selection and crossing, were strongly in evidence a few weeks ago.

In the glass houses were magnificent Calceolarias. Especially fine is Sutton's Cloth of Gold, Sutton's Perfection, and Sutton's Mammoth strains of the herbaceous Calceolarias. Seeds were being ripened, and with the dry weather that has favoured the harvesting operations, a good germinating quality must have resulted. Here I also saw that beautiful new *Senecio* named *auriculatissimus*, the latter appellation meaning "very much ear-shaped," and refers to the form of the smooth, deep green leaves. The plant produces wiry stems and will grow 3 feet high, the flowers being brilliant Dandelion-yellow, and borne in clusters. It blooms profusely. *Streptocarpus Wendlandi*, with its enormous single leaf and tall blue flower scapes, was well shown at the Temple Show. It is a splendid plant to associate on indoor rockeries. The multiflora hybrids were likewise excellent. *Saintpaulia ionantha* and its white variety are gems for pot or border culture in stoves—easy to grow, and so beautiful. Gloxinias in the varieties Empress, Scarlet Queen, Majesty, Reading Scarlet, Reading Purple, Violet Queen, Duke of York, and Duchess of York were glorious both as individual plants and in the mass. Everything, in fact, not forgetting the Alpine Star Cinerarias, Auriculas, Hollyhocks, Schizanthus, *Kalanchoe flammea*, *Calla Elliottiana*, Primulas, tuberous Begonias, and a breadth of 40,000 Strawberries, was in excellent condition, as one might expect. After an interesting inspection of the seed warehouses, packing sheds, offices, &c., &c., there was but time left to run down to Sulhamstead on a visit to Mr. Robert Fenn, about whose personality the following notes deal.

Robert Fenn.

When one comes to look around and see many men bent and feeble at sixty, sixty-five, and seventy years of age, he cannot but be regarded as a personality of rare interest who is so hale and hearty as to trip up and down flights of stairs as lightly as a young girl, and do the necessary work of a large cottage garden, besides the clerical duties incumbent on the assistant overseer of extensive parishes, while bearing the burden of fourscore years and four. Yet such a patriarch is Robert Fenn, one of the oldest identities of the *Cottage Gardener* and *Journal of Horticulture*. Mr. Fenn, indeed, has contributed to the pages of this Journal since its foundation. He is hoping to spend the evening of his days at Sulhamstead, in rural Berkshire, living under the shade of his own Vine and Fig trees (and hundreds of others of his own trees for the matter of that), in as typical an English cottage as an artist could ever choose to paint, or the writer to describe. It crowns the summit of a sharply rising eminence, reached by a winding country lane all fringed with grass, Hemlocks, and Buttercups, the cottage itself being clustered over roof and front with Vines, yellow Banksian Roses, the golden Japanese reticulated Honeysuckle, and a wealth of odorous flowers

produced by the wild English variety. The rays of the evening sun, streaming from over the western side, are broken and veiled by a line of tall Oak trees, Poplars, &c., which the owner of the cottage planted long, long years ago.

Robert Fenn was born at Rushbrooke, near Bury St. Edmunds, two years after Waterloo's decisive battle added lustre to our valour and gave peace to Europe. Three years after Fenn's birth heating by hot water became the system by which warm temperatures are maintained in plant houses. This event, in 1820, has come to be regarded as the inauguration of an horticultural evolutionary period, whose progress still reaches to higher planes at the present day. Hybridisation at that date was unknown, though Dean Herbert was active very shortly afterwards. The earliest novelties in Rhododendrons and Heaths had only reached our English soil just prior to 1820, but many fresh collectors were soon missioned to foreign lands, and gradually, as succeeding decades came and passed, the beauty and variety of the shrubs and plants in our gardens became more remarkable and numerous. We have only to go back to the period of Robert Fenn's prime, and what were gardens when contrasted with those of to-day? Why, the whole races of florists' flowers and Potatoes have become revolutionised since then. It is not so long ago that old Donald Beaton (another contributor to the *Cottage Gardener*) insisted that the best and proper way to propagate Cyclamens was by division of the corms. There is certainly nothing to take exception at in this, but it is representative of the times in which he lived and practised the gardening craft. To-day each garden must have hundreds of Cyclamens, each bearing scores of noble flowers, from seeds sown a trifle over twelve months before the flowers expand.

Mr. Donald Beaton was a close friend of Fenn's for many years. They talked often about hybridising Zonal Pelargoniums. Now inception came, and in this wise: whilst Fenn was thinking about many things, as he was wont, in the old rectory garden at Woodstock, Donald, then at his zenith with the Geranium, suggested Robert to give up his unsatisfactory selections, and try to outvie with creation by artificial cross hybridisation of the Potato? It was done. I take it for granted that all readers of "Our Journal" appreciate Mr. Fenn's prolonged, consistent, and patient work for the improvement of this vitally essential, esculent tuber. He is the "Potato King," a title which sounds indifactory, but which anyone might heartily covet. Well, as I say, the idea to hybridise Potatoes (*Solanums*) having become awakened, our old friend began serious work in 1837. An American gentleman, Mr. C. G. Pringle, gave Mr. Fenn an indigenous variety of that continent, and this was first of all crossed with Red Regent. The resulting seedlings from the hybrid seeds were all different from their parents; a very encouraging start. So the old English varieties, the Rocks, the Irish Regents, Champion, and others, were included in the crossing operations, which have been pursued year after year, even up to 1901. Most of Mr. Fenn's novelties and improved varieties have been offered to commerce through the agency of the Royal Seed Firm at Reading. I had thought to write much more about Mr. Fenn's recent Potato crosses, and about his work in the garden, but he has promised to write of these himself, and his remarks will be of much greater value than mine in this connection. As already mentioned, the old man is busy with parish clerical work, assistant overseer for the two Sulhamsteads, churchwarden, and one of the executive councillors in the Primrose League, lately contested elections for guardians, &c., and now the registration of voters, which is so extensive that, to use his own words, "it is like writing a three-volume novel every six months." He has fully half an acre of garden, and several beautiful meadows, where he cultivated Potatoes in the days of his earlier vigour. He showed me some Elton Pine Strawberry plants, which were given to him sixty years ago by Thomas Andrew Knight, Esq., first President of the Royal Horticultural Society, and near by the Strawberries grows some Rhubarb received at the same time from Turnbull, then in charge of the gardens at Blenheim. All the trees in Robert Fenn's orchards were raised from pips sown by himself, who has lived to gather tons of fruit from them; and is there not something wonderful, to say no more, in this old man, who was able to go and plant The Queen variety of Apple, in a well-selected spot in the orchard, on the day and hour that his, and our, beloved Queen Victoria was laid to rest in the mausoleum at Frogmore?

Robert Fenn has good chances of emulating the old Irish woman who died in Cork a week ago at the age of 108 years. His face is fresh and ruddy, at least so much as is not obscured by his long, snow white, bushy beard. To an eager listener he talks volubly and incessantly, and if his discourse should ebb or wane, a question relative to the friends and fancies of half or three parts of a century ago, prompts the octogenarian mind to further enthusiastic reminiscence. He delights to recall his own and others' efforts to establish numerous flower shows whose careers have been, and still are, successful and flourishing. He is proud of his long connection and service upon the Fruit and Vegetable Committee of the Royal Horticultural Society, whose sittings he regularly attended at a period when the Society required the support of enthusiastic supporters. To those who know Robert Fenn and his splendid work it remains an inexplicable matter why his achievements have gone unhonoured by this foremost of British horticultural societies. His finished work is an ineffaceable monument, and there are some of us who may yet live long to preserve his memory.—WANDERING WILLIE.



The Time of Roses.

THESE queens of all flowers are now in the zenith of their season and their beauty, and who, even among the poorest population, is there that are denied the privilege of enjoying their rich and varied colours and exquisite perfume? The classes are well supplied from their own or their neighbours' gardens, the masses can see them in the public parks if not in their own gardens, where they are produced for their edification. The forthcoming National Rose Show will be eagerly sought by growers and enthusiasts from far and near; rivals will meet together in friendly unity, and put forward the best effort possible in obtaining coveted distinctions and honourable encomiums. The merits, too, of new and old will be discussed, together with the effects of the season on their favourite flower or particular kind.

From a garden point of view the wealth of blossom has been almost phenomenal, and almost every kind seems to vie one with another in the profusion of display. Tea and Noisette H.P.'s, Hybrid Teas, Ramblers of different kinds, China, and Moss all seem to put forward the one great effort to outdo each other. Taking into account the nature of the season, its drought, and the cold winds of the spring, such a satisfactory display of blossoms is almost beyond what the most sanguine grower could have expected. Insects, too, have asserted themselves manifestly in the curled leafage, and aphid-infested buds and tips. For them the weather has been most favourable, and evidently they did not lose any opportunity of attack which circumstances provided. Quassia solutions, and a spray pump, deal quickly and effectively with the aphid tribe; the bitterness of the quassia is long-lasting when applied to foliage. An "Abol syringe" is a good and handy implement for small growers, and is most economical in the distribution of insecticides.

Pergolas are becoming a universal means of adorning lawns and pleasure grounds, stone-built pillars, oak posts, or iron supports, each finding favour according to the dictum of individual fancies. Stone provides the best and most lasting, but their adoption must be governed by the nature and extent of surroundings. In a small garden their employment would scarcely be advised, because it would be too heavy and out of keeping. Iron is undoubtedly the better means of ornamenting the small garden with overhead arches, Oak, Fir, or Yew poles giving similar and more pleasing arrangements for the growth of trailing flowers in other gardens. A tripod of poles, not too neatly trimmed, arranged in round beds on the margins of shrubbery borders, have produced most beautiful features covered with the Rambler or other strong growing Roses, and this phase might well be extended further afield. We recently saw a wonderful growth of the Longworth Rambler clambering round the bole of a tall deciduous tree, and which must, indeed, when in full bloom, present an enviable picture. With so many forms of the rambling section, including the redoubtable crimson variety, Aglaia, the so-called yellow Rambler, and Thalia, white, there is a trio that will give contrasting pictures. Add to these the climbing Perle des Jardins, W. A. Richardson, Reine Olga de Wurtemberg, Paul's Single White, L'Idéal, Gloire de Dijon, Madame C. Menton, Rêve d'Or, Allister Stella Gray, Cheshunt Hybrid, and Celine Forestier, and there should be plenty of colour to brighten up the most sombre of tree greenery, which characterise the lawns and shrubberies at some period of the summer. A very pleasing arrangement is made up of standards as dot plants to a carpet of Crimson Rambler, the latter having the strong shoots pegged down. The lateral flowering spray rising from the low-laid shoots makes a cushion of the rarest colour and effect. Viewed from a foreground of shrubs and trees, these crimson Roses are most effective. Summer houses and Rose temples entwined in these gorgeous dresses light up the distant landscape, and the many

and varied forms of training to which they are adapted makes them favourites with everyone.

Sweet Briers, including the many beautiful hybrids raised by the late Lord Penzance, are welcome both for their bewitching fragrance as well as their delightful colours, now so varied. Hedges of these are very fine, and may be made to serve in small gardens the dividing line between the lawn and garden, or to shut out an unsightly object. Their contiguity to the house is much to be desired, where in the summer evening their fragrance permeate the dwelling rooms through open windows. There is great refreshment obtained from the Sweet Brier when, after slight rain or heavy dew, the scent is given off so freely.

The great wealth of Roses this season is due in a large measure no doubt to two reasons—first, the tropical nature of last summer thoroughly ripening up the growth; and next, the absence of severe frost in winter and spring to damage the wood and tender growth following the pruning. With these conditions remembered, the prospect of the current show time ought to be of the best, and it will be interesting to note the position taken by the great champions in the coming contests. Not only will these events be watched with keen interest by the exhibitors, but by all Rose lovers, or at any rate by the great army of gardeners and others who get reports in their weekly paper.

The value of mulching is fully demonstrated this summer, since, for so long a period, the rainfall has been deficient. Plants, even those planted in the autumn, show much activity of growth under a mulch, wood and growth. Without this soil covering the trees, many of them that are recently planted, show the ill effects of the drought. Trailers planted in hot positions where mulching is not allowed must have plenty of water given them to maintain a healthy balance, otherwise they give indifferent returns another year. Artificial watering, all the same, is not nearly so stimulating as rain showers, nor is growth in new plantations so free as when there is occasional rain. The prolonged drought has served one useful purpose, at least in holding soils, and that is in keeping down weeds by hoeing. The latter does an infinite amount of good when it can be frequently carried out, and weed robbers are nipped in the bud of their existence thereby. Those growers who are blessed with an unlimited supply of natural liquid manures have been able to place it to good advantage of late.—W. S.



ROSA SERICEA. (See page 9.)

Bush Roses.

BUSH Roses are perhaps the easiest of all forms to grow, a number of plants occupying but little room. They may be grown of limited size, with but a few stems, so as to produce strong growths and bold flowers for exhibition purposes; but, however, the plants when growing for this purpose ought not to be grown so closely together. Light and air are necessary each year to build up and solidify the growth which is to produce flowers the following season. Dwarf bush Roses pay for growing in well-prepared soil, hence each year when forming a new bed or giving up a plot of ground for Rose-growing, it is not sufficient to just move the surface and plant, but it is necessary to deeply trench and well manure with well rotted cow or pig dung for light soil, and decomposed horse manure for heavy soil. Although manure is important as a means of enriching the rooting material, it should be well incorporated with the staple soil, as roots not established coming in contact with crude manure are liable to be somewhat injured by it; this should, therefore, be avoided. The present is not the time for planting, but it is not too soon to prepare the soil, at least a commencement may be made where the ground is foul and needs careful trenching in order to improve its condition. Success in this form of Rose-growing, as in others, depends largely on the thorough preparation afforded before the planting is carried out. A hint thus early given may be of service, for the ground is all the better for being broken up and the enriching materials incorporated some time prior to the autumn, when the planting is done.

In all cases trenching is the best method of procedure, especially when grass, weeds, &c., require to be got rid of. Such material as this may be pared off and buried in the bottom of the trench. This early preparation gives the ground time to consolidate, and the fertilising

material added may be, by forking and turning the soil, more freely mixed. This, however, can be done a little time before planting. If marl or clay brought to a pulverised condition, and spread on the surface of light soil, working it in prior to planting, much benefit will accrue to the ground intended for Rose growing. The best method of permanently improving heavy soil is to insure that it is drained, and to efficiently work it for a whole twelve months prior to planting. A winter's exposure, when it is in a roughly dug condition, will do a vast amount of good; then breaking up, manuring, and growing a summer's crop upon it, will still further enhance its value and render its mechanical condition more perfect. Roses like stiff soil it is true, but they like it to be aerated, permeable to roots, and a store of food material available. These conditions are more or less fulfilled under good cultivation.

The varieties of Roses which may be grown as bushes include Tea Roses as among the best. These are popular, useful, sweetly scented, and bloom over a long period. Almost all the varieties may be so grown, but the following varieties may be mentioned:—Anna Olivier, flesh colour, with a large and good flower; Belle Lyonnaise is a deep canary yellow tinted with salmon, a pretty and desirable variety of vigorous growth; Catherine Mermet, flesh colour; Cheshunt Hybrid, cherry carmine, not one of the best for bushes because of its very vigorous shoots. Gloire de Dijon, also very vigorous, but a most useful, early, and late blooming variety; it is not well adapted for small bush treatment. There is, however, a system of growing this variety, and also Cheshunt Hybrid, in beds on the pegging-down system, or training the long growths over bent stakes inserted across the beds, though the growths may be pegged or secured towards the soil. This system has the advantage of securing an immense amount of bloom, and the treatment suits the habit of these particular Roses. The old growths are cut out entirely when the flowering is over. This constitutes the main pruning; the rest consists in shortening the unripe points of the long growths in winter or spring, also in removing weakly shoots. Other varieties too, especially of strong-growing Tea Roses and vigorous Hybrid Perpetuals, may be treated in the same way. Much may be learnt of the habits and capabilities of Roses by treating them in various ways. Exhibition methods of growing are often followed too closely. Growing Roses for effect in the garden requires that the pruning should be less severe, in order that the quantity of bloom may be maintained.—E. D. S.

A Garden Resplendent with Roses.

GREAT Rose shows are pleasurable and valuable for many reasons, and this is especially true of the one held to-day under the auspices of the N.R.S. It may indeed be termed the "queen," around which cluster all the notables of the Rose world. At the show to-day the visitor finds the choicest of old varieties and the newest among the new, so that exhibitors and visitors may judge if any of the latter are superior to the former. In the show tent we look for huge flowers of great substance, perfect form, and fine colour, as the exhibitor strives by the aid of high feeding and special attention to stage each flower in, to quote the words of a great rosarian, "the highest phase of their possible beauty." Such flowers should surely stimulate many visitors to add to their list of varieties some of the good things noted down while viewing the "feast of Roses," and should also cause them to make a firm determination to grow them equally well. Success may not come at first, but the man or woman who keeps on long enough will always succeed in the end.

There are some Roses, however, which are not seen at their best at the shows; one must go into the garden and see them rambling over pillar or arch, bearing countless clusters of flowers, to get a faint idea of their beauty. True, such kinds are often staged in bunches at shows, but such exhibits convey but a poor idea of their capabilities in beautifying a garden. The garden resplendent with Roses should have beds of dwarfs and standards for the purpose of giving fine flowers, but the many other types of Roses which bear myriads of blossoms should be fully represented, too; without them no garden is complete. Crimson Rambler has now been long established as a favourite, as it grows so freely, and bears huge clusters of flowers. In some light soils it often fails to grow freely the first year after planting; but when once established it sends up long trailing shoots each year with unfailing regularity.

I must confess, however, that I have no great liking for a mass of crimson-coloured flowers, for to my mind they are seen to better advantage when associated with white or yellow. Allister Stella Gray, the popular yellow Noisette, is one of the best things I know of for planting with Crimson Rambler so that their flowers may intermingle. If a white is preferred to a yellow variety, plant Rampant, Thoresbyana, or Polyantha grandiflora. Claire Jacquier, a strong-growing climber bearing nankeen yellow flowers, ought to be more generally grown on account of its peculiar beauty. Fortune's Yellow is a lovely Rose always admired when seen in the bud; it is scarcely hardy enough to plant against arches except in very warm situations, but on a south wall, if allowed to ramble freely it is one of the earliest varieties to

flower, and therefore of special value. Other hardy climbing Roses which may always be depended upon to flower freely, are The Garland, flowers nankeen and pink; Leopold d'Orleans, white tipped red; Gracilis, pink; and that general favourite, Félicité Perpetué, creamy white.

Very little pruning is necessary with the varieties above enumerated, but after they have covered their allotted space, dead and enfeebled shoots should be cut away to make room for young ones. This work ought, if possible, to be done immediately after flowering, as the young shoots retained then have plenty of room to develop and get properly ripened. I ought to have included Ayrshire Ruga in the above list, because when treated properly it bears grand flowers of a pale flesh colour. Thin out the shoots and do no shortening, and it will flower splendidly; prune it hard, and few, if any, blooms will be produced. It is a very strong grower, and the bright red colour of the shoots is attractive during late summer and autumn.

A Plea for Moss Roses.

Who has not a warm corner in their hearts for those delightful Rose buds which nestle between a network of moss-like greenery? All, I think, profess to admire, but how few grow them. Let us, indeed, hope that in the days soon to come they will receive the attention their merits entitle them to. Beds devoted entirely to Moss Roses would in their season look particularly attractive, and others filled principally with dwarf Hybrid Perpetuals, with a few Moss Roses interspersed, would create a new and pleasing feature in many gardens. Here is a good selection of varieties, which I think will suit the tastes of all. I hope that thousands will plant and grow them well. Blanche Moreau, pure white, of good form; Perpetual White; Madame Wm. Paul, bright rose; Salet, pale pink; Lanei, rose crimson; Celine, crimson; Gloire de Mousseuses, pale rose; Little Gem, crimson, beautifully mossed; and last, but by no means least, those three old and much esteemed kinds—viz., White Bath; Crested, rosy pink; and the Common Moss, pale rose. The weak growers should be pruned hard, and the strong ones shortened but moderately; no difficulty will then be experienced in getting them all to flower freely. In rich warm soil, where they succeed well, a few isolated bushes should be established on lawns, when they may be grown into large specimens, and add largely to the joys of summer. There are yet many types of Roses to treat of, as well as various ways in which they may be grown. Remarks concerning them must, however, be deferred to another issue, when, among other points, I hope to deal with the interesting one of forming Rose hedges—those popular inventions of modern brains, or, shall I write, a form of culture copied from Nature's book.—H. D.

Boursault Roses.

MANY of our town and suburban villa gardens are now resplendent with this decorative and easily grown class of Roses. Originating from Rosa alpina, a native of the Alps, they are extremely hardy, growing vigorously and flowering freely in most unfavourable situations. For training on trellises, pergolas, pillars, they are also specially suitable, the long smooth flexible growths being easily bent in any direction.

In pruning, the old wood should be thinned out and the young growths slightly shortened. The following are the most distinct varieties:—Amadis, or Crimson, with large semi-double purple crimson flowers; Blush Boursault, with very large double blush flowers; Elegans, semi-double rosy crimson; Gracilis, full rosy red.

Passing through a Fifeshire health resort lately I noted a charming effect made by Boursault and Gloire Roses planted alternately.—W. L.

Rose Marechal Niel Outdoors.

It is freely conceded by rosarians that this beautiful Rose is suited only for conservatory decoration, and rarely do we find it growing and flowering well outdoors; especially is this the case in even sheltered situations north of the Tweed. I was therefore much surprised when last autumn I came across a good specimen of the variety making luxuriant growths and flowering well on the eastern gable of a small cottage in central Perthshire. The occupier (who is, by the way, a successful and very enterprising amateur) informed me that he had experienced little difficulty in getting it established and acclimatised, and that it required only a few Spruce branches to protect it during severe winter weather. As this district is one of the most exposed, and being far inland registers more frost than most parts of Scotland, I was quite at a loss to account for the phenomenon, when I recollected that the kitchen fire was exactly opposite the spot where the Rose was planted, and that the heat generated by the fire in conjunction with the protective branches would succeed in sufficiently warding off frost. Other Roses doing well on the south and western sides were W. A. Richardson, Gloire de Dijon, Reine Marie Henriette, and a semi-double scarlet with smooth wood resembling a Boursault, but keeping up a profusion of flower all the season. Striking freely from cuttings, it is much in evidence in that part.—W. L., Edinburgh.

Standard Roses.

ROSES grown as standards and half-standards may be cultivated to be beautiful objects, picturesque in appearance, free and abundant blooming, and a real pleasure to the cultivator. The varieties chiefly grown in this way are the Hybrid Perpetuals and Tea Roses. The former lend themselves to the severer pruning necessary to form compact heads, and produce a limited quantity of fine blooms, while the latter may be said to be the chief class of choice Roses where the growths can have a less restricted method of growth adopted in the formation and training of the head. The Tea Roses may, certainly, be pruned somewhat more severely than here indicated when they are planted to produce a strictly formal effect, but the beauty, the truest beauty, of these free-flowering types can only be seen when the growths are of a more or less rambling character, to be obtained by a less free use of the knife at pruning time. Plants of Gloire de Dijon may frequently be seen where the heads have been allowed to extend in an informal manner, and the result is a mass of flowers, strong and healthy growth, and something to admire and cut from. Catherine Mermet will grow in a similar manner, thus increasing the number of its delicate flesh coloured blooms. Madame Willermoz can also be recommended, the flowers being white with salmon centre. Madame Hippolyte Jamain, a white with a copper coloured centre, takes rank as an excellent standard, adapted for extension growth. Moiret, which is not a well known variety, has fine cream coloured blooms, and is a free grower.

Many of the Hybrid Perpetuals, too, may have some amount of freedom allowed them, though as a rule they are better adapted for compact and formal heads. Among the best of H.P.'s for free growth and making large heads may be mentioned Alphonse Soupert, a pure white; Caroline Swales, flesh colour; Dr. Andry, a brilliant red variety, very bright and effective; Marguerite de St. Amand, a magnificent white-pink; Prince Camille de Rohan, velvety crimson. The varieties named below are good ordinary standard varieties, the heads of which may be kept well pruned in each season, so that a medium compact habit is formed:—Abel Carrière, rich velvety maroon; A. K. Crimson, reddish crimson; Baroness Rothschild, white, creamy centre; Charles Lefebvre, velvety crimson; Countess of Oxford, bright carmine red; Countess of Rosebery, carmine rose; Duke of Connaught, crimson; Duke of Edinburgh, crimson; Dupuy Jamain, bright cerise; Edouard Morren, deep cherry rose; Général Jacqueminot, brilliant crimson; Glory of Cheshunt, rich shaded crimson; Heinrich Schultheis, delicate pink; Henry Bennett, bright red; John Hopper, rosy crimson; Madame G. Luizet, silvery pink; Madame Lacharme, white; Madame Victor Verdier, cherry red; Magna Charta, bright pink; Marchioness of Lorne, rose colour; Merveille de Lyon, white; Mrs. G. Dickson, soft pink; Mrs. John Laing, soft pink; Ulrich Brunner, cherry crimson; and Violette Bouyer, white.

The tall standards may in many cases be grown in clumps of three in small circular beds on grass. This is only recommended in the case of compact headed varieties; those that can have freely extending heads should be grown singly. The half-standards ought to be grown singly; the shorter Brier stems take away the gaunt appearance. Standard Roses should always be kept well staked, and the Brier stems kept from hanging or moving about, as nothing looks so bad as a crooked stem and a deformed one-sided head. When a plant deteriorates, uproot it, and plant another at the proper season. The Brier growths, if any appear, are easily distinguishable from the growth of the Rose, and must be rubbed out at once. A copious watering and a liberal mulching at this season sustains the growth, and adds to the vigour of the growth and the brightness of the blooms, as well as prevents insects establishing themselves.—D. S.

Two Pretty Single Roses.

Rosa alpina, a true species, is one of the finest of single Roses, though now that fashion has caused our hybridists to give attention to this section of the genus, much larger and richly coloured varieties are numerous catalogued. R. alpina attains 8 feet height as a

maximum, though usually much less. The flowers are borne solitary, and are of a bright rose colour. R. sericea is one of the Caninae group, and was well figured in Lindley's "Monographia." Our specimen, however, on page 7, represents a variety with much larger flowers than that, and is rather closer and more sturdy in habit. It forms a connecting link between the European and Indian Roses, having R. canina on the former side, and R. indica on the latter. The flowers are slightly cupped, pale pink or blush, almost white in the centre, and the leaflets are small, with several deep serratures at the apex. Species of Rosa are now but rarely cultivated in up-to-date collections; it is at the same time interesting to see these old types out and about.

Waltham Cross Roses.

FEW nurseries are more attractive than those of Messrs. Wm. Paul and Son, at Waltham Cross, in beautiful Hertfordshire. Walking along the smoothly shaven grass walks, lined on either side with choice coniferous and other ornamental trees and shrubs, the view and appearance of the grounds to right and left are far more like those of an up-to-date private residence than of an enterprise where the stock is grown to be sold at a profit. Such a nursery is exceedingly interesting, and Waltham Cross has long borne a great name for the quality of the subjects grown there. Roses at this time of year, midsummer as it happens, form the strongest feature of attraction. Here are breadths

of thousands, all and every kind being represented. Standard Roses are quite a strong section, and though everything would indeed benefit greatly by a prolonged rainfall, yet are the Roses all clean and wonderfully vigorous. Newly shifted Roses are assisted through the drought by a surface mulch above their roots.

For the sake of those who still love and adhere to the old-fashioned Bourbon and garden varieties, I may mention that a full list is maintained in the grounds here. Roses for hedges have recently been more largely inquired after. People are beginning to discover that it is possible to combine beauty with utility, and in this phase of gardening we have a case in point. One of the best dwarf varieties for a dwarf hedge is Rosa floribunda, with its lovely white flowers and its sturdy upstanding habit of growth. As an ornamental climbing Rose we can prophesy a splendid future for Leuchtstern, which in German means bright star. We have previously likened this charming Rose to a refined, pyramidally draped, double crimson Hawthorn. Perhaps the comparison of a Rose, especially such a Rose as this, with a hardy shrub like the May, may appear incongruous; however, the Journal readers are better rosarians than to conjure up mental effects of

a monstrous nature. The general impression derived from a first and distant glance at Leuchtstern conveys the effect which one gets when, at a short distance off, one views a beautiful pink Hawthorn (Craægus). The flowers are single, rosy red with a white centre, beautifully crimped or wavy in outline, and borne in close clusters. The habit is bushy, upright, and the growth robust. Sulphurea is another first water bedding novelty, whose freely produced, creamy flowers show up splendidly above the ruddy leaves and reddish stems. The leaves indeed are almost as deeply toned as those of a purple Beech. Chameleon is a good and showy dwarf Rose, with attractive creamy coloured blooms, suffused with red at the base of the outer petals. Climbing Belle Siebrecht (climbing Mrs. W. J. Grant) drew special attention because of the phenomenal profusion of rich rose-pink large sized flowers it carries. Those who desire a real showy mass of Roses cannot do better than plant this sterling sort. Dundee Rambler was also in superb condition, and near it some of the Wichuriana hybrids, notably Ruby Queen, Pink Roamer, and Jersey Beauty, a trio of charming Roses, whose habit is to creep over banks, negligently upon the surface soil. Euphrosyne, Thalia, and Aglaia are others that but require to be seen, and their own merits would win a way for them. We call attention to them. Rosa robusta is a most brilliant pillar Rose of a rich crimson colour, partaking largely of the Louis Van Houtte form. It sends up immense growths, sometimes in autumn, so much as 7 feet long. As a variety for massing in beds it is one of the best.

One of the most commendable systems of planting in vogue at Waltham Cross is that of massing real good subjects, so that visitors



ROSA ALPINA.

can at once judge of the effect. The same with climbing Roses; there are lines of the various sorts trained to supports along the parts of some of the shrubbery belts. Clio is a good pink H.P., which stands the drought admirably. Aurora, an H.T., is as sweet as La France, and more vigorous. Exquisite, in colour rosy-red, is a charming Hybrid Tea, whose merits give it prominence from amongst many others on either side of it. Conrad F. Meyer, the new rugosa hybrid, with large and beautiful pink blooms, is as promising here as elsewhere. The ripened shoots of this vigorous Rose ought not to be hard pruned, otherwise much of the flower crop will be unpurposely demolished. It is one of the best and most distinct introductions of recent times. It originated in Germany. Empress Alexandra is a new Waltham Cross bedding Rose, and was named by his Majesty the King in honour of his Consort. He wished to have called it Princess of Wales, but this title having been already given to another Rose, the present distinctive was chosen. Besides being a bedder, Queen Alexandra produces blooms admirably suited for the foremost exhibition stand. The colour is almost like that of Gloire de Dijon, though richer, remaining good until the petals fall. We must not overlook the charming Corollina, an all-round useful Rose, either for pot culture or for beds. It is a richly coral-crimson variety, producing great quantities of blooms, and persists until the cold weather ends further growth. And the new American Rose Liberty promises to be one of the finest for autumn use. It, too, is a good pot Rose. The colour is bright crimson. Field Marshal is a good early indoor Rose, and furnishes a desirable outdoor climbing variety, with brilliant crimson blooms. Nor must that most superb new H.T. named Tennyson be forgotten. Few Roses so consistently form such large perfectly shaped blooms. Even after so trying a season this handsome Rose, whose blooms are white and delicately flushed with blush, still maintains the highest quality of flowers, and produces a splendid crop to boot. This is yet another that we have thorough assurance will become a foremost exhibition and ornamental variety. Amongst Tea-scented Roses, Boadicea, blush, with violet coloured base, and the flowers on long stalks, promises finely. And so we might go on calling to notice Souvenir de Catherine Guillot, Souvenir de J. B. Guillot, Madame Fabvier, and others as fine, but enough have been enumerated of old and new to prove that Waltham Cross still maintains its advanced position amongst Rose nurseries.

New Roses at Cheshunt.

WHEN objects are very beautiful it has become a common expression to say such and such, whatever it may be, is "a dream of loveliness," and the phrase is not badly used. The Roses in the "Old" Nurseries of Messrs. Paul & Son at Cheshunt are at this present time something more than a "dream of loveliness," they are magnificent and range wide in their variety. The visitor finds resplendent masses of Carmine Pillar, grown in all manners of form. A common mode is to train it to tall wire fences, whence the plants present an even front on either side, and are starred over with their glorious deep carmine flowers. For use by the sides of long wide alleys, to be trained upward on some light support on either hand, this splendid climbing Rose recommends itself. There is perhaps no more vigorous grower known, and the leafage is beautifully fresh and green. Another variety with absolutely the same habit and character has been named The Lion. The flowers differ in being of a richer blood red crimson, and bright when expanded to the sun. It is very free flowering, and will no doubt come to find considerable favour. Yet another, after the style of the two former, is named Wallflower, so called because of its adaptability to clothe and grow closely to walls. The colour is bright cherry-crimson, the flower being semi-double. This decorative class of Rose is quite the feature and speciality of Cheshunt. Their successes are distinctive.

Here is to be seen a model hedge of Rosa polyantha grandiflora, with thousands of creamy white flower clusters, reaching so high as 14 feet, and in breadth about 4 feet. The massiveness and the floriferousness might well incite envy in those who are privileged to see it. Such a hedge would to me be a handsome feature of any garden, and a similar ornamental factor need not be beyond the possibilities of those who would but plant and bestow careful attention. Our illustration of this climbing Rose shows the size of bloom and habit of flowering. Rosa polyantha Psyche is a recent novelty of considerable worth. The flowers are pink, borne in dense clusters, the foliage being glossy and exceedingly pretty. Euphrosyne is likewise of great merit, and adaptable for bush culture. It produces abundance of trusses, the flowers themselves being single with lovely crimped petals. Purple East, with Wallflower and The Lion, form a trio of most desirable garden Roses. Purple East, by the way, is a name recognisable as that given by Mr. William Watson to one of his poems.

The Wichuriana hybrids are now numerous and very attractive. Wichuriana Jersey Beauty has very large white flowers with a cream centre. These are thrown up nicely above the foliage. Gardenia is a sweet double-flowered variety, resembling the well-known Perle de

Jardin Rose. Alberic Barber, with starry white flowers, is justly prized and used in America upon graves. All of the Wichuriana varieties are creepers, and of a habit which renders them of use in such places as that just referred to. Wichuriana rubra is one of the prettiest so far as foliage goes, and is exceedingly vigorous. Pink Roamer is yet another whose merits are perhaps now fairly well appreciated. It is a prolific bloomer, and distinctive too. The flowers are of goodly size, white in the centre, and having a rose-magenta edge. Perhaps the finest of all is Wichuriana repens, whose large single flowers are symbolical of a Poet's Narcissus, being pure white, and bearing almost the same form. It is a charming and conspicuously decorative variety.

The Japanese rugosa Briers also claim attention. Messrs. Paul have a much deeper form than the type, which has been named atro-purpurea; the flowers are very rich and deep. Giant rugosa is handsome, and specially to be recommended for planting in somewhat rough grass land, or for forming hedges; all the rugosas are serviceable and suitable for this latter purpose. Blanche de Coubert is the best double white rugosa; Rosa pomifera is a decorative species, with fruits, or "hips" that are fleshy and palatable. Mr. G. L. Paul wishes to cross this species with a rugosa, having in view the production of large and probably useable fruits for preserving. Here, indeed, is an ideal!—an edible fruited Rose. Then, for purely ornamental foliar qualities, what is more distinctive than Rosa rubrifolia? The foliage and stems are of a shade of red, a glaucous, peculiar hue, but attractive. The shoots are flexible and refined, the foliage being moderate in size, and one of its chief uses within the last year or two has been as an adjunct with floral arrangements. For this purpose its usefulness, I hope, may become better appreciated. Wichuriana variegata is a delicate but very pretty variety, which I ought to have mentioned earlier. This, if grown in bulk, would contrast splendidly with the foliage of R. rubrifolia. Rosa Una is a novelty from Cheshunt, the offspring from R. canina, the Dog Rose, and a Dijon Tea. The blossoms are large, single, creamy in colour, with a yellow centre. It forms huge cluster bushes when in a good soil, and as it flowers freely its effectiveness can well be imagined.

The H.T. Lady Battersea was still vigorously abloom in several fine breadths of clean and sturdy plants, with their long stemmed, rich crimson, and well formed flowers. In the bud these are charming, though later on they are much less attractive. It is truly one of the best of new Roses, and a very persistent bloomer. It is being liberally grown as an early pot Rose, and furnishes a good late variety for open-air beds. Liberty has many qualities in common with the Lady Battersea variety, and it, too, has assuredly come to stay. Dawn is a magnificent single H.T., with deep, bright pink blossoms, and is free and vigorous. It should prove an acquisition for massing or for loose hedges. H.P. Rev. Alan Cheales is a strikingly effective bedder, with most beautiful rose pink blooms; while to come back for a second to climbers, we think there is a place for Conrad F. Meyer, a variety of mixed extraction. Rosa rugosa was crossed with a Dijon seedling, and the result from this when again crossed with another variety gave the sturdy and rampant-growing Conrad Meyer. What has now been named the Tea Rambler, a Tea crossed with Crimson Rambler, having the Rambler habit and Tea foliage, will be heard more of; and so with Polyantha Eleanor Berkeley, likened to a rampant form of Rosa Mignonne. It resulted from a multiflora cross with Gabriel Luizet. Rev. J. B. M. Camm is an ideal H.P., while further good exhibition or garden Roses will be found in Mr. G. L. Paul's Royal Scarlet, a dazzling variety when exposed to a summer sun; the most advanced scarlet bedder we have. Miss Ellen Willmott is a new Tea Rose almost white, yet faintly tinged with pink; it is very sweet. Leonie Lamesch, a rich and lovely reddish-orange miniature-flowered Noisette, and Eugénie Lamesch, yellow, are both exceedingly pretty Roses. The plants on the good Cheshunt soil are sturdy and clean. But we must now conclude these cursory notes. Their object is to show what the well-known commercial rosarians have succeeded in raising. Brightness, prolificness, and sundry other qualities are characteristics of them all, and a great future seems yet to lie open. The Cheshunt firm may be relied on to uphold its past traditions.

Rose Rêve d'Or.

FEW Noisette Roses are more handsome than the one we have here chosen for illustration. It is a very strong climber, producing stout and rapid growth, with nearly evergreen foliage. Other Noisettes and Roses of the Gloire de Dijon race are apt, when grown on a wall, to become weak and bare in foliage towards the bottom, so that all the blooms are out of reach, and the plants are unsightly from the naked appearance of the branches. This is not the case with Rêve d'Or, and it adds considerably to its merit as a climber that the lower parts of the plant are fairly well clothed with foliage and blooms. It is not liable to mildew. The deep yellow blooms come in clusters, and are individually of good size and form. It is quite hardy, makes a capital standard, and to our minds furnishes one of the best of climbing Roses, though sometimes it is a shy bloomer.



NOISETTE RÊVE D'OR.

NOTES & NOTICES

Weather in London.—After a period of some weeks' drought, rain in torrents fell on Saturday evening, and again on Sunday night. On the latter evening the rain literally fell in "whole-water" sheets, almost flooding the streets. Monday was dull and warm; Tuesday, showery, and Wednesday was warm, breezy, and bright.

Royal Gardeners' Orphan Fund.—Her Majesty Queen Alexandra has graciously consented to continue the patronage to the Royal Gardeners' Orphan Fund, which her Majesty formerly extended to the institution as Princess of Wales.

Birmingham and Gooseberries.—Tons of Gooseberries were sent into the Birmingham market on Saturday the 22nd June from Worcestershire, chiefly with the result that the fruit could hardly be given away. The average price was a halfpenny per lb., at which rate the growers sold at a dead loss.

Miss Ormerod.—We regret to hear that Miss Ormerod is still very ill at her house, and among her flowers at St. Albans. A unique position is hers, for she has taken a first place, with no second, in a department of life which is properly man's. To her the farmer and the horticulturist have had to turn for tidings of the blights and insects and grubs that are the bane of their flowers, their fruit, and their crops. At her present advanced age (says a contemporary) Miss Ormerod is still, when her health is good, keenly alert in the pursuance of her researches; and, inheriting some of her late father's literary talent, she has lately been engaged on the compilation of her memoirs.

A Perplexed Gardener.—An amusing case, in which Lady Charles Beresford sued Mr. Philip Lyttelton Gell, J.P., for £22 4s., representing gardeners' wages and coke supplied, was heard at the Kingston County Court on Monday. Mr. Gell counterclaimed £23 for breach of contract. Mr. Gell rented Park Gate House, Ham, from Lady Charles, taking over the household staff, and the flowers and garden produce. Her ladyship, however, reserved one greenhouse for forcing flowers, and out of this the trouble arose. The head gardener refused to supply Mrs. Gell with some Hyacinths. Then both ladies wanted some Lilies of the Valley, and they were sent to Lady Charles; hence came about the wages crisis, and the heating of the greenhouses was suspended. Judge French awarded Lady Charles Beresford £15 on the wages claim, and dismissed the counterclaim.

"One and All" Flower Show.—We have received the schedule of prizes offered for competition at this year's "One and All" Flower Show to be held at the Crystal Palace on August 16th and 17th. It marks a considerable advance on those which have stimulated such notable displays of working men's produce in previous years. Full particulars are included of the Countess of Warwick's scheme for a combined educational flower show, where the various institutions engaged in the technical teaching of horticulture and agriculture will have an opportunity of meeting and comparing results. Lady Warwick presents a challenge vase for competition among these institutions, and her sister, Lady Algernon Gordon-Lennox, we are informed, will found a similar challenge trophy for local horticultural societies, with a view to stimulate their interest in this movement.

Fruit Growing.—Continuing his interesting articles upon the state and outlook of the English countryside in a contemporary, Mr. Rider Haggard discourses upon the practicability of growing Strawberries on some lands instead of Wheat as a profitable undertaking. He says:—"One gentleman (a large farmer in Herefordshire) told me that last year from 6½ acres of Strawberries he netted £200 clear profit. Another plot of 60 acres is said to have produced 150 tons, which sold at £25 a ton, the net profit on this parcel amounting to £1500. How often does an ordinary cultivator of the soil clear £1500 profit in these days, even from a farm of, let us say, 1000 acres? The inference is suggestive, and in this connection I may say that much of the English Wheat land which is now practically worthless would be well suited to the crop. The question leads to another. How many English farmers can grow a Strawberry, or, being ignorant, will take the trouble to learn the craft?"

The Flora and Fauna of Greenwich Park was the title of an essay read by Mr. A. D. Webster before the West Kent Natural History, Microscopical, and Photographic Society in January last. It has now been printed and issued in pamphlet form.

Correction.—The signature given as "S. Eaton," to the article on "The College Gardens, St. John's, Oxford," at page 545 last week, should have been "S. Heaton," that of the recently appointed instructor in horticulture to the Oxfordshire County Council.

Appointments.—Mr. James Tansley, for the last twenty-five years head gardener to the Right Hon. Earl of Derby, K.G., Witherslack Hall, Grange-over-Sands, Lancashire, retires on a pension. His son, Mr. George Henry Tansley, at present head gardener to Allan Lupton, Esq., Sleningford Park, Ripon, York, succeeds him at the end of this month. * * Mr. Herbert Spooner, Royal Gardens, Kew, to succeed Mr. Adolphus H. Kent, of Messrs. J. Veitch and Son, Ltd.

Variorum.—None more than the Strawberry growers blessed the rainfall of Saturday and Sunday last. * * The novel sight may be seen in Dover of a young tree growing out of a very high mill chimney in a public thoroughfare. Notwithstanding its extraordinary position, the tree has grown 2 or 3 feet high. It is believed to have its root in an old nest.

Carnations from Kelso.—Two blooms of the new Carnation named "Duchess of Roxburghe," sent out last year, have come to us from Messrs. Lang & Mather, Carnation specialists, Kelso-on-Tweed. It was awarded a certificate at the Drill Hall meeting on June 18th. The ground colour of the flower is a beautiful rich primrose, striped with a lovely shade of terra-cotta and heliotrope. It is one of the finest and most desirable of recent yellow-ground varieties.

An Agave in Bloom.—The rarity with which Agave americana flowers in this country renders the sight now to be seen in Victoria Park, London, of some interest. They have there a specimen which is seventy-five years old, and up to the present time it has never flowered. The flower spike made its appearance only in April, and grew with great rapidity, sometimes as much as 6 inches in a day. The bloom is now expanded. One result of this curiosity is that attention is being drawn to Victoria Park, which is really one of the prettiest of London's open spaces.

Horticultural Club's Annual Excursion.—The annual excursion of the club, to which ladies are specially invited, will take place on Wednesday, July 17th. The members and their friends will meet at Liverpool Street Station to leave by the train starting at 10.25 for Cheshunt, and arriving there at 11.20, where brakes will be in readiness. They will then drive to Messrs. Paul & Son's Rose nursery and afterwards to Mr. Thomas Rochford's, who has kindly invited the party to luncheon, and after seeing his establishment will drive through Wormley Woods to Panshanger, the seat of Earl Cowper, visit the mansion and gardens, and reach Hertford about 6.0 p.m. Dine at the Dimsdale Arms at 6.30, and return to London by an evening train. Tickets 15s., to cover all expenses, wine excepted. Applications for tickets, with the amount enclosed, to be made to Harry J. Veitch, Esq., 34, Redcliffe Gardens, South Kensington, S.W., before July 10th, he having kindly consented to make the arrangements.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901. June.										
Sunday .. 23	S. W.	deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Monday .. 24	W. S. W.	60.9	55.2	68.3	59.3	—	64.1	59.7	55.9	55.7
Tuesday 25	N. W.	61.3	54.7	68.0	44.9	—	62.1	59.9	55.9	34.2
Wed'sday 26	N. E.	62.5	54.7	70.2	45.0	—	62.0	59.8	56.1	34.3
Thursday 27	E. S. E.	63.3	55.4	74.2	47.6	—	62.2	59.8	56.2	39.3
Friday .. 28	E. S. E.	62.2	56.9	72.0	51.3	—	64.2	60.3	56.4	39.3
Saturday 29	E. S. E.	65.1	58.5	73.3	54.2	—	64.5	60.6	56.5	45.3
		70.0	58.8	74.0	57.9	0.21	64.8	61.1	56.7	52.1
MEANS ..		63.6	56.3	71.4	51.5	Total 0.21	63.4	60.2	56.2	43.0

A week of fine bright weather, with drying wind, and a nice rain on the 29th.



Grape Gros Maroc.

PERMIT me to thank your many correspondents for their kindness in replying to my inquiry *re* the above Grape. I notice at page 459 that another writer (R. Morse) complains of this variety. It is for us to give it another trial, and if in similar positions next year we may be able to chronicle better results. In my opinion, and no doubt in that of your many readers, there is nothing so unpleasant to look at as an unfruitful Vine. "Nothing but leaves." "W. H. R." in a more recent issue is loud in praise of this variety; as to being of an unfruitful nature, not at all according to his experience. He cites an instance of a "Vine carrying twenty-five bunches annually. This is under the average." Will "W. H. R." inform your readers where this Vine is to be seen, also length of cane? It may be that some who think but lightly of this variety might be able to go and see it if it still exists.—R. M.

Ants.

I HAVE been applied to this day by a lady residing in a pretty cottage near the Thames, whose garden is afflicted with a sudden invasion of ants. They have walked up and over a magnificent standard of *Homère* until it turned black and died, accompanied by another standard, and now they are turning their attention to a fruit tree. Their nest is not to be found; they apparently come up through a long passage in the parched soil. She has tried nearly everything, methylated spirits, on which they seemed rather to fatten, white precipitate, a sponge sweetened and squeezed out when sufficiently populated, and is now drenching the ground with paraffin, but the plague is but little abated. I suggested that which the old lady told the clergyman she had tried with an aggravating husband; he had bidden her so act as to pour "coals of fire on his head." She replied, "I have tried hot water, sir!" Could not my friend try boiling water? I had overlooked the obvious answer that boiling water which killed the ants would probably kill the standard *Rose* also. Would any of your experts come to the help of the lady, and advise in your columns how to meet such emergency?—A. C.

Equisetum arvense.

IN answer to "J. T. A.," page 549 of last week's Journal, I can say that one very good method of getting rid of this rather troublesome weed is good cultivation. When I took charge of this garden several years ago one division was much infested with what are termed by the workmen in this neighbourhood Horsepipes. When digging the ground over, the soil had quite a dark appearance, owing to the great quantity of the black rhizomes it contained. No special means were used to destroy it further than to pick out the thickest of the roots or, rather, rhizomes, the first time it was dug. It came up rather thickly for a season or two, but by thorough cultivation, deep digging, manuring, and keeping the hoe at work between growing crops, it has disappeared. Indeed we rarely ever see a plant of it now, and only when we are longer than usual in getting the hoe at work. This is a much more economical method than trenching. I might give further proof of this method. In a village near here there are several cottage gardens, forming a narrow strip along the side of the public road. At one end is a garden that is completely overrun by this weed, almost covering the different crops, which is, I feel sure, through bad cultivation, from the following fact. This garden, or rather half a garden, belonged years ago to another man, who is a good cultivator, consequently he had no Horsepipes to bother him. Some time ago it was divided into two—I might say it is on the side of a hill, and it was divided lengthwise, so the soil is about the same in both cases. While the old tenant had a clean garden, the newer one is greatly troubled by this weed. Many of the cottagers do nothing to their gardens from the time the crops are harvested until it is time to sow and plant again, then they manure, dig, plant, and sow almost altogether. Such things as Potatoes, Peas, Broad Beans, &c., are put in as the digging is proceeded with, consequently the land cannot be cleaned until the crops appear, as they cannot see where they are. I advised the owner of the garden to try a different method; he has done so this season. He can now keep the Horsepipes in check before they have time to grow strongly. So far his garden is much cleaner than it has been for some time. I am convinced, if he will follow up this method, he will soon get rid of the weed.—J. S. UPEX.

Monster Strawberries.

I HAVE pleasure in sending, Mr. Editor, four Strawberry fruits from my crop, which is probably the most remarkable in the kingdom. They are the product of *Leader*, from yearling plants. You will find that one fruit measures 8 inches around its largest part. I have gathered several basketsful that would cover the top of an ordinary tumbler glass. There are as many as six and eight of these large fruit, and numerous small ones, not yet matured, on individual small plants. The crop is quite phenomenal. The first to ripen was on June 9th; 2s. per pound, and 2d. each fruit, has been realised for them in Oswestry Market. Have any of your readers had similar experience? Space for this letter in your valuable journal will be esteemed.—ALFRED DAVIES, *Ardleen, Llanymynech.*

[The fruits sent were monsters in size, just as Mr. Davies describes. They travelled very well, and came from the box clean and fresh. The flavour was pleasant, and much finer than we had expected from such large Strawberries. The advocates of "yearling plants" will rejoice.]

Royal Horticultural Society of Ireland.

THE discussion which has been going on of late is not likely to prove of much good, either to Mr. Brock or the above society. Bearing on the question as to who was to blame, permit me to inform your readers that if Mr. Brock had explained to the secretary of the society how he wished the cheque to be filled in, his wishes would have been carried out. It is an open secret that more than one gardener receives the cheque direct from the society without it passing through the employer's hands. No, Mr. Brock, it would have been better had you bided your time till next December and brought the question before the members of the then society and have it settled, as it must be sooner or later. What the Ulster Society can do, a society like the above should be better able to do.—ULSTERIA.

[This discussion, which is now closed, may, we hope, not be without beneficial results. There is need of fuller understanding between officials and exhibitors, and perhaps of leniency and less precipitancy on both sides. Directly or indirectly, the discussion on Mr. Brock's case has had a good effect, and that has been our desire in publishing the numerous letters on the subject. Not a year passes by without bringing to notice cases of conflict arising from misunderstandings of the rules and bye-laws of the hundreds of horticultural societies disposed over these isles. And all goes to prove what great care is required in drawing up the rules and bye-laws in the first instance, and in adhering to and applying them afterwards.]

The Shrewsbury Schedule.

AFTER the clear and corroborated testimony furnished by Messrs. Adnitt (page 503), Wilson (page 525), and myself (page 481), anent this dispute, I regret to find Mr. Iggulden still sceptical and obdurate. Worse still, his remarks all through the controversy have savoured strongly of vindictiveness, reminding one of that notorious junior counsel who was told, upon consultation with his learned superior, "No case, abuse plaintiff's attorney." I had fondly hoped that a certain V. M. H. on the Fruit Committee, and who, I guess, had a finger in the pie originally, would have put the matter in the right light, but as he has not done so let us once more review the facts of the case, leaving out all the irrelevant matter introduced by Mr. Iggulden, confining ourselves strictly to class 73, and the simple points in dispute. First Mr. I. says that a schedule blunder has been committed in the Shrewsbury schedule of 1901 by excluding Canon Hall from class 73 competition, and he further assumes the reason to be because it is "not" considered distinct from Muscat of Alexandria. Now I denied this, and do still deny, that any blunder has been made in class 73 on those grounds, and also that Canon Hall is not excluded from that competition (the details were given in my last, page 481). I further say that the restrictions imposed were carefully and deliberately arrived at, and largely from past experience.

Having thus reviewed the facts, it will be patent to everyone to see how ridiculous it is for Mr. I. to further obscure the facts, by his continued shuffling, in asking me what he chooses to call "a plain question"—viz., "If Mr. C. or the authorities maintain that Canon Hall is not perfectly distinct from Muscat of Alexandria?" The words, "to maintain," if I understand them rightly, mean *to continue*; *to support a position*; but as neither the schedule, other correspondents, nor myself have ever stated or inferred that the above varieties were not distinct, one sees the absurdity of the plain question, to maintain or deny something that has not been said. To say the least, it is a process of shuffling. All I wish to "maintain" is, that a schedule blunder has not been made by the Shrewsbury Committee or their advisers, and that Canon Hall is not debarred from class 73 competition. On the other hand, those readers who have followed the controversy will see clearly enough that it is Mr. I.'s reading of the schedule that has "blundered," hence he, too, is not the infallible being; whilst those writers who have not the "time" nor the "inclination" to wade through, or grasp the whole correspondence, have no right to reply.—W. CRUMP, *Madresfield Court.*



Upward Sap Flow.—The garden Mignonette, writes Dr. B. D. Halsted, is a good subject by which to illustrate the upward flow of liquid in cut stems. This is because the petals are delicately fringed with white, and with these the liquid will pass and quickly show a beautiful colour. Methyl-blue has proved the most striking colour for illustration.

Pelargonium Leopard.—Ivy-leaved varieties of Pelargonium are seldom shown for certificate, but in the one illustrated on page 17 we have a distinct acquisition to the section. Mr. H. B. May of Dyson's Lane Nurseries, Upper Edmonton, exhibited a plant at the Drill Hall meeting on June 4th, when the Floral Committee recommended an award of merit. The habit is of the ordinary character; the trusses are of average size, with large flowers, but the chief quality lies in the pretty purple blotches on a bright rose ground. It ought to find a ready demand amongst recent novelties.

The First Wasp Nest.—The fruit grower awaits the advent of this voracious robber with unmixed feelings of dread. The season has been apparently a most favoured one for the nesting of the queens; many of them were trapped, but a greater number evaded this, and their progeny will be sure to be a source of trouble later. It is well to be provided with a store of the needful means of dealing with them, whichever form it may take. Cyanide of potassium is the favourite of many, because it is so simple and yet effective. Weed killers, tar, and petroleum are each used by some. Scott's and Davis' destroyers are good for dealing with them on choice fruit on walls or in the vinery. We found and destroyed the first nest on June 25th. In some seasons they have been earlier found.—W. S.

Potash as a Fruit Tree Fertiliser.—The ashes of most fruits contain large quantities of potash. For this reason the use of potash as a fertiliser in orchards is usually attended with beneficial results. Apples and most of our other larger fruits remove from the land in which they are grown large quantities of potash from year to year, and unless this constituent is replaced in some form or other, there is a liability that it may become exhausted, and the crop may consequently suffer. In countries abroad, where much more attention is paid to fruit culture than nearer home, and where orchards extending to hundreds of acres are sometimes kept, this problem has been much more strikingly brought home to fruit growers than in the United Kingdom. In America potash in various forms (very frequently in the shape of wood ashes), is largely employed by fruit growers in maintaining the productive capacities of their orchards.

A Useful Spring Bedder.—The reference is to *Alyssum saxatile*, which we consider to be of great importance where spring bedding is carried out to any extent. Of course we must have our Tulips, Wallflowers, Myosotis, &c., but a corner should be left for this most beautiful and easily grown subject. Whether it be planted in the herbaceous border, rockery, or in the flower garden proper, it matters not; it seems as much at home in a sunny as a shady position, and is admired by all who see this old-fashioned and common garden plant. The best plan we have experienced is raising this *Alyssum* from seed about every second or third year, especially if the plants are intended for the herbaceous border, where only a small amount of room can be given them; also, if required for the annual spring bedding, they are best raised annually, similar to Wallflowers. They do not care for replanting when once they are established, hence the reason for keeping a stock of young plants at hand, which produce larger flowers than older subjects. The seed may be sown outside, but a better method is to prepare seed pans and sow in these. When the plants are sufficiently large enough to be handled, prick them out on a nice border in well worked soil, and they will make bushy little plants by the autumn. This plant, if used in conjunction with blue Myosotis, makes a delightful combination, and again when used with the common red double Daisy, the latter making a capital edging, and showing the *Alyssum* to perfection.—J. S. A.

Double Primula obconica.—A double-flowered form of *Primula obconica*, recently exhibited in Paris, was illustrated in the "Revue Horticole" dated May 16th. It is the first recorded break in this direction, and is regarded as the forerunner of great things.

New Ivy-leaved Pelargoniums.—Mr. J. G. Hawley of Swinton kindly sends us a boxful of cut trusses of the new Ivy-leaved Pelargoniums Mrs. Hawley and Col. Baden Powell. The former bears rose-scarlet trusses of semi-double flowers, the latter is a pale rose-lilac novelty with larger, well spread semi-duplex blooms. Both are distinctive, though not finer than some of the newer blotched varieties that were recently certificated by the Floral Committee of the Royal Horticultural Society.

A Good Regal Pelargonium.—Mrs. H. J. Jones Pelargonium is one of the most exquisitely beautiful decorative varieties I have seen. In habit it is very compact, and a robust grower, while the large trusses are well thrown up over the foliage. The flowers are perfect in form, and of good substance and size; the upper petals are heavily blotched maroon, shading off to a beautiful deep rose at the margin, while the three lower petals are broadly margined a soft flesh pink, centre satiny white. In the sun the flowers have an appearance of silver dust having been sprinkled over them.—H. A. L.

Cutting off Seed Pods.—Many of us know things quite well, yet do not mind our attention being called to them. On the list is the cutting off of seed pods. When a plant flowers it should form seed pods to perfect its mission. But if we prefer flowers to seed we cut off the decayed blossoms, preventing the plant wasting its energies on seed-producing, and then it starts the work afresh, and more flowers come. Rhododendrons and Azaleas are particularly of this class. Left to themselves seed pods succeed the flowers, and these tax the plants heavily to perfect them. Cut off these seed pods just as soon as the flowers fade, and the chances for good growth and bloom for the next year are greatly improved. Taking two plants, one so treated and one not, would be an object lesson worth noticing.

Mr. T. H. Cook.

WE had much pleasure in announcing last week that his Majesty the King had been pleased to appoint Mr. T. H. Cook (head gardener to the Earl of Wemyss and March, at Gosford) to be head gardener at the Royal Gardens, Sandringham. As our readers will remember, the vacancy at Sandringham has been caused by the transference of Mr. McKellar to the Royal Gardens at Windsor in succession to Mr. Owen Thomas, who retires on a pension. Mr. Cook had the honour of an interview with the King on the 17th inst. at Sandringham, with the result as already stated, and the appointment may be regarded as one of the best in the country.

Mr. Cook, who is only thirty-two years of age, is not unknown to the gardening world, for his name was recently brought very prominently to the front on account of his being on the short "leet" of four, out of 134 applicants, for the post of city gardener at Edinburgh. He commenced his gardening career under his father in Ireland, but before he was sixteen years of age he removed from home and entered the gardens of the Marquis of Bute at Cardiff Castle, where he remained under Mr. A. Pettigrew for nearly six years. From here he went as outside foreman to Whittinghame Gardens, the seat of A. J. Balfour, Esq., a position he held for nearly two years, leaving to take up a similar post at Gosford, where ultimately he was appointed head gardener in 1893. His abilities are such that, during the time he has had charge, the gardens at Gosford have been regarded as amongst the best in Scotland.

As may be imagined, Mr. Cook is a thorough enthusiastic gardener, and whatever he takes in hand he carries out to a successful issue, and his assistance was always of the greatest value to the various horticultural societies with which he was associated. Although he has never been carried away over exhibiting, yet he was not unknown as a successful competitor at the Edinburgh Flower Shows. In taking up the duties of head gardener at Sandringham, he follows a very able man, and fills a most difficult position; but, from what we know of Mr. Cook, we feel sure that the high reputation of the Sandringham gardens will be efficiently maintained by him, and he has our hearty congratulations and best wishes.

Societies.

Royal Horticultural—Drill Hall, July 2nd.

THE Drill Hall on Tuesday last was chiefly devoted to the special Rose Show, held in conjunction with the National Rose Society. Roses are evidently not so fine this year, though in cases here and there the blooms at the Drill Hall Show were very superior. Messrs. Paul & Son's decorative Roses winning the first prize in class 12, were a great feature, as were the Waltham Cross blooms, which received a gold medal. Messrs. J. Veitch & Sons, Ltd., staged a new Rambler Rose, which is likely to become as popular as Crimson Rambler. Orchids were represented by only three or four plants, notably a fine *Cattleya Mendeli albescens*, from Sir Frederick Wigan, Bart., which received a cultural commendation. A botanical certificate was given to *Aëranthes denticus* from Burford, and an award of merit to *Schomburgkia Thomsonianum*. The Floral Committee recommended eight certificates. A great number of new Fellows were proposed, and in the afternoon Prof. Henslow delivered one of his interesting lectures.

Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair); with Messrs. H. Esling, Jos. Cheal, Wm. Farr, S. Mortimer, Alex. Dean, Wm. Fife, Geo. Kelf, E. Beckett, A. Ward, James Sweet, A. Balderson, and W. Wilks.

Messrs. Laxton Bros., from Bedford, brought Strawberries Fillbasket, Trafalgar, and Climax. A cultural commendation was awarded to Miss Adamson (gardener, Mr. Geo. Kelf), South Villa, Regents Park, for a splendid boxful of fruits of Strawberry Waterloo. A cultural commendation was also awarded to Mr. Beckett of Aldenham House, Elstree, for new Pea Edwin Beckett, a splendid new sort. An award of merit was given to Givons Late Prolific Strawberry, from Mr. Wm. Peters, Givons Gardens, Leatherhead.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. Chas. T. Druery, H. B. May, R. Dean, H. Selfe-Leonard, J. Jennings, J. F. McLeod, Wm. Howe, J. Fraser, C. Dixon, Jas. Hudson, Chas. E. Pearson, H. J. Jones, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, J. D. Pawle, Edwin Mawley, C. J. Salter.

Messrs. Barr & Sons, King Street, Covent Garden, W.C., staged some very fine Delphiniums, notably Lancelot du Lac, with very strong, large flowers of great substance. The colour is deep gentian-blue, overlaid with purplish-violet. Their *Coronilla rosea alba* is a very showy plant; as also *Tropæolum polyphyllum Leichtlini*.

The blue *Amaryllis* (*A. procera*) was staged by H. T. Pitt, Esq. (gardener, Mr. W. Noble). Messrs. Wm. Cutbush & Son, Highgate, London, N., had forwarded a number of new Carnations, the one named Ethel Smith being very pleasing. The colour is bright rose-pink.

Canna Miss Kate Gray, from Mr. H. J. Jones, Lewisham, was greatly admired. It is a magnificent flower, of huge size and great substance, and coloured a bright orange-crimson, and yellow throat. He had also the dark crimson Carnation bearing his own name. Rev. W. Wilks brought some new and improved varieties of his famous Shirley Poppies. Words fail us to describe these exquisitely beautiful flowers; they are æsthetically perfect.

Mr. James Douglas, Edenside, Great Bookham, Surrey, staged Don Carlos, yellow ground Carnation; Tabley, rich glowing crimson; and Pearl, a pure white smooth-petalled variety. There were others equally good.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, H. Ballantine, E. Ashworth, F. A. Rehder, H. T. Pitt, Jas. Douglas, T. W. Bond, N. F. Bilney, J. Wilson-Potter, H. T. Tracy, W. H. Young, J. G. Fowley, and H. M. Pollett.

The labours of this body were light. They gave one award and one botanical certificate besides a cultural commendation.

Following is a report of the Rose competition.

Mixed Roses.

In the class for twenty-four Roses, distinct, there were four competitors, of whom Messrs. B. R. Cant & Sons were placed first with Gustave Piganeau, Caroline Testout, Ulrich Brunner, Madame de Watteville, Maurice Bernardin, Helen Keller, Her Majesty, Marchioness

of Downshire, Alf. Colomb, Maman Cochet, Ben Cant (new gold medal Rose), The Bride, Comtesse Ludre, Innocente Pirola, Comte Raimbaud, Marie Verdier, White Lady, A. K. Williams, Madame Hoste, Lady Helen Stewart, Ethel Brownlow, Horace Vernet, and Bridesmaid. Messrs. D. Prior & Son, Colchester, were second with a bright stand. The best were Maréchal Niel, Victor Hugo, Maman Cochet, Horace Vernet, and Bessie Brown.

In the amateurs' class for eighteen, distinct, Mr. O. G. Orpen was first with a superb set, but there were too many light coloured flowers. The varieties were Maman Cochet, Bessie Brown, François Michelin, Her Majesty, Ulrich Brunner, Mrs. Ed. Mawley, Marchioness of Londonderry, Mrs. J. Laing, Mrs. Sharman Crawford, Marquise Litta, White Maman Cochet, Madame de Watteville, Killarney, Innocente Pirola, Cleopatra, The Bride, Souvenir de S. A. Prince, and Catherine Mermet. The Rev. J. H. Pemberton, Havering-atte-Bower, Romford, was second with a moderately strong exhibit.

Mr. Chas. Turner, Slough, was a decided first in the open class for eighteen distinct varieties with Gustave Piganeau, Her Majesty, Prince Arthur, Nester, Ulrich Brunner, Caroline Testout, Mrs. J. Laing, Duke of Teck, Madame Gabriel Luizet, Chas. Lefebvre, Bessie Brown, Comtesse de Nadaillac, Maman Cochet, Maréchal Niel, A. K. Williams, Catherine Mermet, Duke of Wellington, and Mrs. W. J. Grant. Mr. G. Prince was second with some superb flowers of Bessie Brown, Comtesse de Nadaillac, Kaiserin Augusta Victoria, and others.

In the amateurs' class for twelve distinct varieties Mr. T. Halsted, Oak Lodge, Reigate, was first with Caroline Testout, Etienne Levet, Marie Finger, Comte Raimbaud, A. K. Williams, Kaiserin Augusta Victoria, Chas. Lefebvre, Clio, Souvenir de President Carnot, Alfred Colomb, La France, and Marchioness of Londonderry. Mr. J. Wellesley, Westfield, Woking, was second.

Mr. G. H. Baxter, Hutton Park, Brentwood, was first for six, distinct, with Her Majesty, Marquise Litta, A. K. Williams, Mrs. Sharman Crawford, La France, and Kaiserin Augusta Victoria. Mr. J. Thurlow Thompson, Oak Lane, Bounds Green, was second. For nine blooms of any H.P., H.T., or H.B., Mr. C. J. Salter, gardener to Mrs. Haywood, Woodhatch Lodge, Reigate, was first with Her Majesty, and the Rev. J. H. Pemberton was second with A. K. Williams. For six blooms, Mr. J. Bateman was first with Marchioness of Londonderry, while the Rev. F. Page Roberts, Halstead Rectory, Sevenoaks, was second with Mrs. R. G. Sharman Crawford.

Teas and Noisettes.

In the amateurs' class for eighteen single trusses, not less than twelve varieties, and not more than two trusses of one variety, the first prize of £3 fell to Mr. O. G. Orpen, West Bergholt, Colchester. He had some splendid Roses; they were so strong. A Maman Cochet bloom in

the back row was ideal, and his Comtesse de Nadaillac, Muriel Grahame, Maréchal Niel, and Madame Cusin were each models. We found no second. In the open class for eighteen ditto, distinct, the Oxford Roses, sent by Mr. Geo. Prince, of Longworth, Berks, won him the first prize; Messrs. D. Prior & Son, Colchester, coming second. The blooms here were not so good as those in Mr. Orpen's collection, though in Prince's stand were splendid blooms of Comtesse de Nadaillac, Bridesmaid, Madame Cusin and Souvenir d'Elise, The Bride, Catherine Mermet, and Medea. There were six entries. For twelve single trusses, not less than nine varieties, Mr. E. M. Bethune, Denne Park, Horsham, led off with a well-displayed stand. He had given them plenty of space, and had grand blooms of Madame Cusin, Catherine Mermet, The Bride, Bridesmaid, and Comtesse de Nadaillac. Rev. F. R. Burnside, Great Stanbridge Rectory, Rochford, Essex, second; his blooms were under size. Four entered. Miss Beatrice H. Langton, Raymead, Hendon, N.W., won for the six single trusses with good blooms of white Maman Cochet, Sylph, Bridesmaid, and Maman Cochet. Second prize was awarded to Mr. G. A. Hammond, Cambrian House, Burgess Hill. Mr. G. H. Baxter, Hutton Park, Brentwood (gardener, Mr. H. Holloway), was second prizewinner for nine single blooms of one variety, staging fair specimens of Innocente Pirola; while first went to Mr. O. G. Orpen with bold blooms of Maman Cochet. These latter were richly coloured, and very fine on all points.

Garden Roses.

For thirty-six varieties, not less than three trusses of each, open, space occupied by the exhibit not to exceed 10 feet by 3 feet, the first prize was carried off by Messrs. Paul & Son, The Old Nurseries, Cheshunt, N. The exhibit was indeed magnificent, including massive bunches of H.T. Gustave Regis, Paul's Carmine Pillar, Wichuriana, Pink Roamer, Noisette L'Idéal, T. François Dubrenil, H.T. The Dawn,



MR. T. H. COOK.

T. Madame Falcot, H.T. Madame Jules Groley, Lady Battersea, and H.T. Killarney. This was one of the grandest collections ever seen in the Drill Hall, and one of the features was the large number of new varieties it contained. Second prize fell to Messrs. F. Cant & Co., Colchester, whose bunches of blooms were not so large and impressive to appearance. Souvenir de J. B. Guillot was splendidly staged, as also W. A. Richardson, Isabella Sprunt, Macrantha, Ma Capucine, The Garland, Helène, and Irene Watts.

Exhibition Roses in Vases—Mixed.

In class 16, for nine distinct varieties (not to include more than four vars. of Teas and Noisettes, and all garden Roses excluded), Mr. Geo. Prince of Longworth was awarded first place. He had a very strong set of blooms, admirably staged in vases above black velvet. There is no doubt but that it pays to take pains in the staging. Fisher Holmes was displayed in the centre; Innocente Pirola and Madame Cusin in front; Bridesmaid, Kaiserin A. Victoria, Marquise Litta, Souvenir de S. A. Prince, Mrs. W. J. Grant, and Bessie Brown were other varieties. Messrs. B. R. Cant & Sons, The Old Rose Gardens, Colchester, made a strong second, and here was Général Jacqueminot, Madame Gabriel Luizet, and Mrs. John Laing, and Gustave Piganeau, all in excellent condition. Four entered. For six distinct varieties ditto, Rev. J. H. Pemberton, The Round House, Havering-atte-Bower, Romford, was the only exhibitor, and staged well.

In the open class for six distinct varieties, seven blooms of each, the prize of £2 was won by Mr. Geo. Prince. This exhibition was very superior, and his blooms of Maman Cochet, Muriel Grahame, Comtesse de Nadaillac, Innocente Pirola, Catherine Mermet, and White Maman Cochet were splendid. Messrs. B. R. Cant & Sons were second with fair blooms, but poorly staged. There were three entries. The first prize in class 19, for six distinct varieties, five blooms each, was deservedly won by Mr. O. G. Orpen.

Miscellaneous Exhibits.

Messrs. Wm. Paul & Son, Waltham Cross, Herts, filled the whole length of one of the central tables with decorative and general Roses. They showed also a number of seedlings, of which the decorative Tea named Mrs. Kitto promises to be a much admired variety. The buds are sweet, but the full blown flowers are even finer. They also staged a climbing Rose called Golden Queen—the ideal for a Rose of this kind. The stems are dark red with deep green, glossy foliage, and a profusion of rich salmon-buff colour. Madame Falcot, we believe, enters into the parentage of this Rose. It is a desirable variety. Corallina was shown finer than ever; also Pink Roamer, the Wichuriana hybrid. Waltham Rambler is a new variety to this class of typical habit, free flowering, with trusses of beautiful rose-lilac flowers. Alexandra, a new buff yellow variety, with a flush of pink in it, made an equally attractive display. This must not be confused with Rambler Queen Alexandra. The same firm had a host of other new and especially good Roses.

Messrs. James Veitch & Sons, Ltd., King's Road, Chelsea, staged a massive exhibit of a strong-growing Rambler Rose named Queen Alexandra. The variety comes as a cross between Turner's Crimson Rambler and multiflora simplex. It has the merit of being much brighter or lighter in colour than Crimson Rambler, and is not so double. The colour is bright deep rose-pink with a white halo round the golden bunch of stamens in the centre. It is exceedingly prolific, and in all other respects resembles Crimson Rambler.

Certificates and Awards of Merit.

Canna Miss Kate Gray (H. J. Jones).—A superb large variety; the colour is orange, with yellow in the centre (award of merit).

Carnation Maggie Hodgson (W. Cutbush & Son).—A magnificent Malmaison, of the same colour as Norah Pike, and equally fragrant (award of merit).

Delphinium Dorothy Daniel (Kelway & Son).—A large flowered, of a peculiar purple shade (award of merit).

Poppy Shirley varieties (Rev. W. Wilks).—These lovely Poppies are too well known to call for any description (first-class certificate).

Pink Mrs. H. Young (H. Young & Sons).—A splendid pink variety with dark crimson in the centre (award of merit).

Rose Bellefleur (Geo. Prince).—A superb single Hybrid Perpetual of a rich crimson colour (award of merit).

Schomburgkia Thompsonianum (Sir T. Lawrence, Bart.).—With sinuous brownish-yellow sepals and violet purple tipped lip. A pretty little variety (award of merit).

Scolopendrium vulgare sagittato-cristatum (C. T. Drury).—The profuse varietal name renders any description superfluous (award of merit).

Spiraea astilboides Silver Sheath (H. J. Jones).—A tall growing variety, with grand spikes of pure white flowers (award of merit).

Strawberry Givons Late Prolific (W. Peters).—A large fruit, broader at the base, and tapering to the shoulders; bright, rich crimson scarlet colour, firm and even, with a grand luscious mellow flavour; a first-rate late Strawberry and heavy cropper (award of merit).

Richmond Horticultural, June 26th.

(Concluded from page 544.)

OUR report of this large Surrey horticultural show was prepared too early to allow us to print the prize lists or other awards last week. Some of these we now furnish. It was reported, however, on page 544, that Mr. Lock was first in class 1 for a plant group arranged for effect. He was second, while Mr. H. E. Fordham, The Nurseries, Twickenham, was awarded the first place. We are sorry to have prejudged the groups; tastes certainly differ greatly. In the large class for forty-eight distinct varieties, three blooms of each, Messrs. B. R. Cant & Co. of Colchester won the Chancellor challenge cup and a sum of £6. They staged some grand blooms, including the varieties Madame Victor Verdier, Le Havre, Bridesmaid, Medea, Marchioness of Downshire, Duke of Wellington, Marie Baumann, Mrs. W. J. Grant, Souvenir de S. A. Prince, Comtesse de Nadaillac, White Lady, and Bessie Brown. Second and third place fell respectively to Messrs. Prior & Son, Colchester; and Messrs. Frank Cant & Co. There were four entries. Messrs. Harkness & Son, Bedale, Yorks, led in class 2 for twenty-four distinct varieties, and Mr. Chas Turner was second. The Bedale firm had splendid blooms of Ulrich Brunner, Bessie Brown, The Bride, E. Y. Teas, Maman Cochet, Souvenir de President Carnot, and Comtesse de Nadaillac. For twelve blooms of any Rose save Tea or Noisette, Messrs. Alexander Dickson & Sons, Royal Nurseries, Newtownards, Co. Down, led off with superb examples of Mildred Grant, splendidly coloured. Messrs. Prior & Son were next with Mrs. John Laing; and third Messrs. F. Cant & Co., with Bessie Brown. Ten exhibited.

Messrs. Paul & Son, The Old Nurseries, Cheshunt, were first in the large class (6) for decorative or garden Roses. They staged magnificent bunches of Madame Falcot, Anne of Gierstein, Eleanor Berkeley, Madame de Resal, Lady Battersea, Madame Chedane Guinoisseau, Rambler, Wallflower, W. A. Richardson, Rosa Mundi, Aglaia, and the Old Moss. Mr. J. Mattock, New Headington, Oxford, followed second with Madame Abel Chatenay, Madame Jules Grol-y, Papa Gontier, and Souvenir de Catherine Guillot, each especially good. The Messrs. Cooling of Bath came third. Mr. Geo. Prince was first in class 7 for eighteen bunches of decorative Roses. He staged good samples of Bellefleur, Souvenir de C. Guillot, Cecil Brunner, Marquis of Salisbury, Julien Mannering, Homère, Papillon, and William Allan Richardson. Messrs. F. Cant & Co. were second.

The gold medal was awarded in class 8 to Messrs. B. R. Cant and Sons for their new Rose named "Ben Cant," a handsome crimson-scarlet H.P. The petals are strong and well formed, the flower being exceptionally bold. A card of commendation was given to Messrs. Paul and Son, Cheshunt, for their single Rambler Rose named "The Lion." It resembles Carmine Pillar, but is richer in colour and has not the white centre. Messrs. Prior & Son received the silver medal for the best Tea in the show, having a splendid bloom of Maman Cochet. O. G. Orpen, Esq., received the silver medal with Rose Mrs. John Laing as the best H.P.; while for the best H.T., G. A. Hammond, Esq., of Cambrian House, Burgess Hill, won with La France. In the nurserymen's section the silver medal for the premier H.T. was awarded to Messrs. Alex. Dickson & Sons, who staged Muriel Grahame in this instance. The best H.P. in this section was a bloom of Mrs. John Laing from Messrs. Prior & Son, and the premier Tea was Maman Cochet, also from the latter firm.

In the fruit section the first prize of £5 went to C. Swinfin-Eady, Esq., K.C. (gardener, Mr. W. Lock), who staged a handsome Melon. Sutton's Al variety, and a dish each of Nectarines, Peaches, Cherries, Strawberries, and two bunches of Grapes, Black Hamburgh being one, and Foster's Seedling the other. Mr. L. J. Barker was a good second.

The following is the list of special awards made to non-competitive exhibits:—*Gold medals* to Leopold de Rothschild, Esq. (gardener, Mr. J. Jennings), Ascott, Leighton Buzzard, for a group of magnificent Malmaison Carnations, and to Sir Frederic Wigan (grower, Mr. W. H. Yongg) for Orchids. *Silver-gilt medals* were awarded to Messrs. H. Cannell & Sons, Swanley, for Cannas; to Mr. John Russell, Richmond, for the following groups:—1, stove and greenhouse plants; 2, Crotons; 3, Ivies; and 4, Maples. Also to Messrs. James Carter & Co., High Holborn, London, W., for Gloxinias; to Messrs. James Veitch & Sons, Ltd., Chelsea, for 1, Roses in pots; 2, Kalanchoe; 3, Ivies and Water Lilies; Messrs. J. Hill & Sons, Barrowfield Nurseries, Lower Edmonton, for Ferns. *Silver medals* to Mr. Robt. Green, London, for Crotons; Mr. W. Icton, for Palms; Mr. Wm. Thompson, Palms, &c.; Messrs. T. S. Ware, Ltd., The Nurseries, Feltham, for group of cut herbaceous flowers; Messrs. Hugh Low & Co., Bush Hill Park, Enfield, for miscellaneous group; Messrs. J. Peed & Sons, West Norwood, S.E., for cut herbaceous flowers; Messrs. Young & Co., The Nurseries, Stevenage, Herts, for cut flowers; Messrs. Barr & Sons, King Street, Covent Garden, for herbaceous flowers; Mr. W. Rumsey, Waltham Cross, for Roses; Messrs. Thos. Cripps & Son, Tunbridge Wells, for Maples; Messrs. Fromow & Sons, Chiswick, for Maples; Messrs. Spooner & Sons, for cut Roses; Mr. S. Eida, Japanese dwarf trees; Messrs. George Jackman & Son, Woking, for herbaceous flowers. *Certificate of merit* to Messrs. Laxton Bros., Bedford, for Strawberries. *Vote of thanks* to Mr. Robt. Sydenham, for rustic tube decorations, Sweet Peas, Spanish Irises; Messrs. Jones & Sons, Shrewsbury, for Sweet Peas; Messrs. Bath & Co., Ltd., Wisbech, for Pæonies.

Colchester Rose, June 27th.

THIS show was held, as usual, in the grounds of East Hill House, the residence of the Mayor, C. E. Egerton Green, Esq. The competition in Roses was not great, owing to the earliness of the season, and the Richmond (N.R.S.) show the day before. Roses, in general, were below par, and the standard low. In thirty-six, Messrs. B. R. Cant & Sons were first, the blooms being of greater substance than those of their rivals, but they had no noteworthy flowers, the best being perhaps Marie Verdier and Mrs. E. Mawley. Messrs. Frank Cant & Co. second, the best bloom being a good typical specimen of Bessie Brown, which took the medal in this division, though it could hardly be called an exceptional example. Messrs. D. Prior & Son third, with more expanded blooms; they had a good Mrs. John Laing and Bessie Brown, and a nice sample of Marchioness of Downshire, which many amateurs find a difficult Rose to get good. In eighteen Teas B. R. Cant & Sons were again first, their best specimen being a good flower of The Bride beautifully tinted with pink on the edges of the petals, and a Madame Cusin, also well coloured and tinted. Messrs. Prior & Son were second, having Cleopatra and White Maman Cochet as their best. Messrs. Frank Cant & Co. followed very closely behind, having Maman Cochet in good order, and a fine well-shaped flower of François Dubreuil. In garden Roses, Messrs. Frank Cant and Co. were easily first, their bunches being not only good but very nicely arranged, testifying to much pains and skill; B. Cant and Sons were second.

In the amateurs' division Mr. Orpen was first for eighteen Roses, having nice clean specimens of Gabriel Luizet, Maréchal Niel, Madame Cusin, and Mrs. W. J. Grant; Rev. A. Foster-Melliar second with a poor stand, Bessie Brown and Golden Gate being his best. The same order prevailed in twelve Teas, Mr. Orpen having Edith Giffard, The Bride, and Catherine Mermet, good; and Mr. Foster-Melliar's box as usual looking rather dirty and uncared-for, La Boule d'Or being the best.

For six similar Teas Mrs. A. Cant was first with Maman Cochet, Mr. Orpen second with Souvenir d'Elise, and Mr. Foster-Melliar third with Edith Giffard, a Rose which, till now, has been very good this year. For six similar H.P.'s or H.T.'s Mr. G. H. Baxter was first, and Mr. Orpen second, varieties forgotten, but they were not exceptional; Mr. Foster-Melliar third with Mrs. W. J. Grant, which looked very tired. Most noticeable among the minor exhibits were two most excellent sixes from Mr. R. W. Bowyer of Hertford Heath, in one of which was a first-rate bloom of Her Majesty, which took the medal. The Tea medal Rose was a bloom of Maman Cochet, in a box shown by Mr. Wilson Mamage, and a capital bloom of Madame Cusin occurred in a box of Mrs. A. Cant's.

Apart from Roses, the show was a most excellent one; and, remembering former Colchester Rose Shows, I can only say that the society and its shows have improved year by year ever since Mr. O. G. Orpen has had anything to do with it. The decorative classes and tables were subjects of much interest and criticism of the judging, as is customary. The Asparagus gigantic, as usual, and the herbaceous plants, I believe, very fine. I can only say that I was walking about with a very well

known doctor, not only in Colchester, but in sporting circles all over the world, and he must have had something very extraordinary in his first prize stand in the way of an Alstroemeria, for when we were hid away for a pipe after lunch at the back of the secretary's tent, a well known professional hunted him up and asked him about it. Three or four times he was accosted about it as we went together to look at the decorative classes, and when at last two men came up from opposite sides at the same moment, with the same words in their mouths, "What about that Alstroemeria?" I fled in despair.—W. R. RAILLEM.

Croydon Horticultural, July 3rd.

The show of this influential society was held in the grounds of Addiscombe Court, Croydon, yesterday, splendid weather prevailing. Some of the larger Rose entries from nurserymen did not appear, owing no doubt to the boisterous and rainy weather of the last few days. On the whole the show was a most interesting and varied one,

fully representative of horticulture in the neighbourhood. The exhibits were staged in three large marquees, in the midst of a fine grassy park. The local nurserymen's exhibits formed, as usual, a strong and welcome adjunct, the hardy plantsmen being especially numerous.

Looking over the schedule, we were surprised to see such large prizes offered for Palms and groups of Palms (as much as 140s. and silver medal for a group of Palms in class 57), while the classes encouraging fruits and vegetables could only offer 15s. as the highest for first prizes. The tables should be turned, for what is there in Palms, or the growing of them? There was, however, no competition for Palms, which is surely remarkable.

Roses.

In class 3, for twenty-four Roses, distinct, the first prize of £1 fell to Mr. T. Butcher, nurseryman, Shirley, whose collection, to say the least, was nothing to boast about. Mrs. John Laing was fairly shown, as also Marchioness of Londonderry, and one bloom

of A. K. Williams. Mr. J. R. Box followed with third prize; no second. There were no entries in any of the classes up to No. 8. This latter was for thirty-six distinct Roses, in which a 25-guinea Challenge Cup was awarded. Mrs. Hayward (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate, won for the second time in succession with moderate blooms, including Ulrich Brunner, Louis Van Houtte, Dnpuv Jamain, Mrs. W. J. Grant, Mrs. Sharman Crawford, Mrs. F. Cant (good), Gustave Piganeau, Caroline Testout, Kaiserin Augusta Victoria (fair), Madame G. Luizet, Marie Baumann, Mrs. J. Laing, and Her Majesty. Mr. E. M. Bethune, Denne Park, Horsham, was a very good second with blooms of smaller size. He had some good specimens of Maman Cochet, Bessie Brown, Muriel Grahame, Caroline Testout, Kaiserin A. Victoria, Mrs. E. Mawley, and Innocente Pirola.

Mr. R. E. West of Reigate led off in class 9 for two dozen distinct varieties. He had a collection of moderate blooms, many of them lacking refinement. His Maman Cochet, Mrs. S. Crawford, Mrs. J. Laing, and Capt. Hayward were each good blooms. For eighteen Tea or Noisette Roses, in twelve varieties, Mr. E. M. Bethune led off with a strong and very fine lot, amongst the best in the show. The stand



IVY-LEAF PELARGONIUM LEOPARD. (See page 14.)

included especially fine blooms of Muriel Grahame, Innocente Pirola, Sylph, F. Kruger, The Bride, Bridesmaid, Madame Cusin, Comtesse de Nadaillac, Mrs. Ed. Mawley, Maman Cochet, Medea, Caroline Testout, and Marie Van Houtte. Mrs. Hayward was a poor second. In the succeeding class, however, for six blooms, distinct, in bunches of three, she had some good blooms, though the only exhibitor. Bessie Brown, K. A. Victoria, F. Michelon, Ulrich Brunner, Alf. Colomb, and Mrs. J. Laing formed the display. Then, again, for twelve of one variety the same competitor led, having in this case an even set of splendid blooms of Her Majesty; Mr. E. M. Bethune followed as a strong second with lovely Maman Cochet blooms; third, Mr. P. Burnand, Hill Grange, Reigate.

Mr. R. E. West beat Mr. Burnand in class 14 for twelve distinct Roses; Mrs. J. Laing, Bridesmaid, Caroline Testout, and Duke of Edinburgh were particularly rich in colour. Mr. Bethune led off for the twelve Tea and Noisette Roses, distinct, with capital blooms. The rain had had its effect, but Bridesmaid, Francisca Kruger, and Mrs. Ed. Mawley varieties were lovely. He again led for four distinct varieties, three of each; while for nine, distinct, Mr. F. W. Amsden, Croydon, was first. Mr. W. Holmes-Davis, Thornton Heath, won in class 17 for six varieties.

Local Classes.

In the amateurs' section, for a 7-guinea Challenge Cup and N.R.S. silver-gilt medal, twelve distinct Roses being asked for, Mr. W. R. Lascelles, Middleheath, Croydon, was placed first. His stand included very creditable blooms of Caroline Testout, Ulrich Brunner, Marchioness of Londonderry, Gustave Piganeau, Countess of Rosebery, Her Majesty, Chas. Lefebvre, La France, Mrs. S. Crawford, Madame V. Verdier, and Merveille de Lyon. Mr. W. Holmes-Davis came third; Mr. A. C. Gifford as second. Mr. W. H. Lascelles led off for six H.P. Roses, and Mr. F. W. Amsden second, each with strong fresh blooms. There were eight entries in this class. For six Tea or Noisette Roses, distinct, Mr. Lascelles again showed the way with inferior blooms; and second, Mr. C. B. Crisp of Croydon. The latter won for six blooms of one variety, he staging Her Majesty.

Table Decorations.

The competition, as is usual at the Croydon Show, was keen amongst table decorators. Mrs. A. C. Robinson, Roma, Stafford Road, Wallington, led in class 25 with a graceful display, mostly in pink Sweet Peas and Cornflowers. Mrs. C. Chaff, Park Hill Nurseries, Croydon, followed second with a heavier yellow Poppy arrangement. Mrs. A. C. Robinson led also in special class B, with a similar display to her other table. For a flower stand arrangement Mrs. West of Reigate was placed first with a gaudy display. Mrs. C. Chaff had the finest bouquet. Mr. C. Lane, Birtwood, Upper Caterham, won for twelve graceful table plants; Mr. G. Lewry, Duppas Hill, Lee, coming second.

Sweet Peas.—Mr. C. B. Crisp was placed first for twelve bunches of Sweet Peas, in eight varieties. He staged White Eagle, Captain of the Blues, Princess Beatrice, H. M. Stanley, Emily Eckford, Aurora, Lord Stanley, Primrose, Countess of Radnor, Orange Prince, Venus, and Ignea. His bunches were massive, and given plenty of room. Second prize fell to Mr. W. H. Stell, Castle Hill, Addington, who had cut more stalk and leaf-growth, which aided the effect only that the blooms were smaller. His Meteor, Salopian, Countess of Radnor, and Primrose were sweet.

Hardy and Other Flowers.—Mr. G. Lewry led for twenty-four bunches, but the selection was not at all choice, nor especially fine. There are plenty of good things offered by the numerous nurserymen, and these should find a place instead of inferior flowers.

Mrs. Haywood's able gardener from Reigate was deservedly placed first for twenty-four bunches of stove and greenhouse flowers. He staged *Miltonia vexillaria*, *Utricularia montana*, *Masdevallia Chimæra*, *Erica ventricosa*, *Anthurium Scherzerianum*, *Cannas*, *Cypripediums*, *Dendrobiums*, *Vandas*, *Phalænopsis amabilis*. For a collection of Gloxinias, Mr. R. V. Barrow, Park Hill, Croydon, was first, and Mr. J. Galvin, Russell Dene, Purley, was winner for a group of plants (class 76). Mr. J. Sletter of Homedale Park Hills, was first in the new class for a table of decorative plants. Mr. C. Lane was second; and Mr. R. V. Barrow third. All were tasty.

Miscellaneous Exhibits.

The beautiful *Oenothera rosea* was in grand form from Mr. Amos Perry of Winchmore Hill. Some of the English Irises strongly resemble varieties of *I. Kämpferi*. *Astrantia carniolica*, with rosy flowers, was also good. The exhibit was select. Mr. John Carlton, Tunbridge Wells, had a bright corner, including *Iris Monneri*, *Centaurea dealbata*, *Lathyrus rotundifolius*, *Dicentra eximia*, and *Clematis recta*, all of them good subjects for the border.

Mr. Ed. Kromer, Bandon Hill, Croydon, staged a group of Orchids. His *Lælia purpurata* was very strong, *Aërides Fieldingi*, *Cattleya Warneri*, *Epidendrum vitellinum majus*, *Disa grandiflora*, and *Oncidium curtum* were conspicuous. Mr. S. Eida showed his Japanese dwarfed trees, which always create much amused interest; while amongst seed merchants were Messrs. E. W. & S. Rogers of High Street, Croydon, with an interesting exhibit of manures and horticultural sundries. A number of beautiful photographs on easels, showing artificial indoor

and outdoor ferneries, &c., were staged by Messrs. Eggett & Son, artistic rock workers, Thames Ditton, Surrey.

A group of well grown double and single tuberous Begonias was sent from Forest Hill, and was a feature of attraction. Eight well grown pot Peach, Plum, and Nectarine trees, bearing a profusion of fair-sized odorons fruits, were sent from Oaklawn, Edenbridge, by W. Fletcher, Esq. They would have benefited by being thinned. And almost by the side of them were Messrs. H. Cannell & Sons' handsome Cannas.

Messrs. J. Peed & Sons, Roupell Park Nurseries, West Norwood, arranged a magnificent group of Gloxinias, rising upward in a rounded mass from the grass. The effect was good, and the plants were individually exceedingly well flowered—in fact, they were phenomenal in this respect. The leafage was very vigorous, some might say too vigorous; but good flowering qualities only come with plenty of strong foliage. The varieties were numerous, and proved a very superior strain.

Messrs. Barr & Sons, King Street, Covent Garden, had *Heuchera sanguinea*, *Coreopsis*, *Irises galore*, *Pentstemons*, *Lychises*, &c., a fine display.

Fruit.—For three bunches of black Grapes Mr. W. Lintott, Marden Park, had first with good samples of Black Hamburgh. Mr. W. Harris, Denne Park, was a fair second. Mr. W. Lintott also led for Buokland Sweetwater bunches, with large berries. He also led for fifty Strawberries. Mr. Salter was first for one Melon, a specimen of The Countess.

A splendid group of stove and greenhouse foliage and flowering plants was arranged by Mr. W. J. Simpson, Falkland Park.

Mr. John R. Box, had also a good display in this line, and a fine assortment of hardy flowers. Messrs. J. Cheal & Sons of Crawley were forward with Roses, cut shrubs, and hardy flowers.

Messrs. Geo. Jackman & Son, Woking, brought forward *Delphiniums*, *Linum arboreum*, *Shirley Poppies*, *English Irises*, *Liliums*, *Carnations*, and many fine border plants.

Windsor.

ROSE GROWER'S TROPHY.—Windsor Rose Society's annual show, which for several years was held in the Castle grounds under Queen Victoria's patronage, took place on Saturday on Fellows' Eyot, Eton, and it was marked by another victory for Messrs. B. R. Cant & Sons, of Colchester, who again won the Queen Victoria challenge cup. Mr. Cant thrice won the cup which the late Queen originally presented, and it became his property. Her Majesty gave another cup in 1899, and Mr. Cant again won.

Edinburgh Gardeners.

The Scottish Horticultural Association held their annual excursion on Saturday week, when the members travelled by rail to Aberdour, where conveyances were waiting. A drive through the grounds of Donibristle, with its magnificent avenues of stately trees and well-kept parks, was much enjoyed. At Fordell House the party were conducted through the hothouses, gardens, pinetum, and policies, all of which were found in the best of order and neatness. A hearty vote of thanks to Mrs. Henderson, the proprietrix, and to Mr. Ramsay, gardener, for his kindness and attention, was proposed by the president, Mr. Comfort, and heartily accorded. After a pleasant drive to Aberdour, tea was served by Mr. Weber, of the Woodside Hotel, after which the party returned by train to Edinburgh.

Bristol Gardeners' Mutual Improvement.

The monthly meeting of this Society was held at St. John's Parish Rooms on Thursday evening, June 27th. Mr. E. Binfield occupied the chair. Minutes of the last meeting were read and confirmed. The paper for the evening was on the "Culture of Orchids," being the first prize essay, kindly given by Mr. Green, Redland, and won by Mr. F. Lee of Redland, who deserves great credit for the masterly way his paper was put together, proving by it that he has made a study of this most popular flower. Mr. Lee mentioned the rapid strides which Orchid culture has made during the past few years, the large importations into this country, as well as the reasonable prices which they can now be bought at, causing many horticulturists to make them their special hobby. The lecturer gave a selection of the best varieties to grow, such as *Cypripediums*, *Dendrobiums*, *Cattleyas*, *Oncoglossums*, and others, and also cultural directions, including potting, watering, &c., emphasising the necessity of cleanliness as being the most important item of successful cultivation. Drainage needed careful attention, in order to carry off the surplus moisture, owing to the more frequent waterings needed compared with other plants. For composts Mr. Lee recommended equal parts living sphagnum moss and fibrous peat; proper Orchid pots being preferable to the ordinary flower pot, allowing the air to circulate more freely amongst the roots, fresh air being most essential for their well being. The different species requiring different treatment, Mr. Lee went into details for the cultivation of each, in such a way that every member present was able to carry away many valuable hints. Concluding his paper, the lecturer mentioned a few of the different pests which Orchids were subject to, as also the best methods for their destruction. Altogether the paper was brim full of information, and was much appreciated by all present.

An excellent discussion followed, and Mr. Lee was warmly congratulated on his success. Prizes were awarded as follows:—Dish of Strawberries.—First, N. C. Dobson, Esq. (gardener, Mr. Thoday); second, Lady Cave (gardener, Mr. Poole, F.R.H.S.). Orchid in bloom.—First, Bruce Cole, Esq. (gardener, Mr. Lee); second, G. Howes, Esq. (gardener, Mr. White). Six Tea or Noisette Roses.—First, N. C. Dobson, Esq. (gardener, Mr. Thoday); second, A. Baker, Esq. (gardener, Mr. Orchard). A certificate of merit went to Lady Cave (gardener, Mr. Poole, F.R.H.S.) for twelve Canlifflovers.

Royal Meteorological.

The closing meeting of this society for the present session was held on Wednesday afternoon, the 19th inst., at 70, Victoria Street, Westminster, Mr. W. H. Dines, B.A., president, in the chair. A paper by Mr. H. Helm Clayton of the Blue Hill Observatory, U.S.A., on "The Eclipse Cyclone, the Diurnal Cyclones, and the Cyclones and Anticyclones of Temperate Latitudes," was read by the secretary. The author has discussed the meteorological observations made along the path of the total solar eclipse in the United States on May 28th, 1900, and also those made during three previous eclipses. He finds that a cyclone follows in the wake of the eclipse, though the changes are very minute and feeble, the fall of temperature developing a cold-air cyclone in an astonishingly short time, with all the peculiar circulation of winds and distribution of pressure which constitute such a cyclone.

A paper by Mr. F. Napier Denison of Victoria, British Columbia, on "The Seismograph as a Sensitive Barometer," was also read by the secretary. A Milne seismograph was installed in 1898 at the Meteorological Office, Victoria, B.C., and the author has since that time compared its movements with the changes of atmospheric pressure recorded by his aërograph. He finds that when the barometric pressure is high over the Pacific slope from British Columbia southward to California, while off the Pacific coast the barometer is comparatively low, the horizontal pendulum of the seismograph tends to move towards the eastward. This movement appears to be due to a distortion of the earth's surface, caused by the heavier air over the Pacific slope depressing the underlying land surface below its normal position, while on the other hand the comparatively light air over the adjacent ocean tends to allow the sea and earth beneath to rise above its normal level. It has been found that when an extensive storm area is approaching from the westward, and often eighteen to twenty-four hours before the local barometer begins to fall, the pendulum of the seismograph swings steadily to the eastward, completely masking any diurnal fluctuations that might have existed, as the storm area approaches, and in the event of it being followed by an important high area, the pendulum will begin to swing towards the westward before it is possible to ascertain this area's position on the current weather charts.

Rhododendrons at Glasgow Exhibition.

THE grounds surrounding the Exhibition at any time are sufficiently attractive to call the attention of gardeners and citizens alike, the conformation and richness of natural beauty attracting to this particular spot of the famous Kelvin Valley attracts thousands at all seasons of the year. Kelvin Grove, so sweetly sung by the poets, is even yet replete with many a charm of its former self. Not so many years ago the scene of this comparatively well populated district was a country resort for the Glaswegians, where many a pleasant stroll was enjoyed by love-sick swain and hoary sire alike. From what remains of the original character of the woody grove it needs no great stretch of imagination to clothe it in the garb of the poet. The river is beautifully winding in its course almost from its source till it falls into the great mother Clyde. But its course through the Botanic Gardens and Kelvin Grove Park is very specially marked with all its inherent beauty, and great praise is due to the citizens and rulers of a go-ahead city like Glasgow for the meritorious act of preservation.

The already well arranged grounds enclosing the exhibition buildings have been very considerably brightened up by the aid of exhibits from various nurserymen. We noticed very specially a magnificent display of Rhododendrons, before the grand restaurants of Mr. MacKillop and Mr. MacKenzie on the other side of the river, from Mr. D. W. Thomson, Edinburgh. Perhaps the grounds would be considerably improved did all the exhibitors contribute more flowering shrubs, and less of the ornamental foliage types. A flowering plant always commands the attention of everyone, while the beauties of a foliage plant may only appeal to the tastes of a few. Mr. Thomson's Rhododendrons have certainly added a luxurious beauty to the part of the grounds in which they are placed. They are arranged in two lots, one of which is comprised of medium-sized plants, and the other of specimen. The latter lot evidently is a valuable one, judging from the size of plants and the extra fine types. Almost every shade of colour common to the species is represented, and both flowers and trusses are very large and profuse. If some think the Orchid the queen of flowers in the indoor department of gardening, we think the finer types of Rhododendrons assuredly merit the same title for the out-of-door department. At all events they have an orchidaceous appearance in Kelvin Grove amid so many green shrubs and trees, and picturesque buildings. In conclusion we may be permitted to say that Mr. Thomson has had for many years great fame for the quality and quantity of his Rhododendrons, and the exhibit at Kelvin Grove is no small credit to his already well-earned merit.—PLANTA.



Fruit Forcing.

Vines.—*Early Forced Houses.*—After the Grapes have been cut the Vines should be thoroughly syringed to cleanse them of dust and insects. The worst of these pests is the mite known as red spider, which in its countless numbers so impoverishes the leaves that they fall prematurely, and the buds are so ill-formed that the growths from them the following year are poor, and the fruit scanty or indifferent. Where red spider has disfigured the foliage and caused some of the leaves to fall, which is not uncommon in early and hard forcing, laterals should be encouraged from the upper part of the bearing shoots, so as to excite root action and prevent the pruning buds starting into growth. These buds, though the leaves may have fallen, will not start provided there is growth above them to appropriate the sap, and they will usually perfect the embryonic growth and crop formation of the coming season. Where the basal and main leaves are fresh, a moderate extension of the laterals, especially in the case of weakly Vines and those long subjected to early forcing, should be encouraged from the extremities, or above the pruning buds only, and in any case they must not be allowed to interfere with the principal leaves. The Vines must not be allowed to go to rest, or they will make a second growth late in the summer. Therefore, syringe every evening until they are freed of dust and red spider, or, if other pests, apply an insecticide, and then syringe occasionally so as to preserve the foliage as long as possible in health. Ventilate to the fullest extent day and night, and if there are movable lights they may be taken off in mild weather. Where, however, it is intended to lift the Vines and lay the roots in fresh compost near the surface, the roof-lights must only be moved on condition that they are held in readiness to place over the Vines in case of heavy rains, as a wet soil is not favourable to lifting. There is no cleanser equal to rain from the clouds, and a judicious withdrawal of the roof-lights frees the upper side of the leaves of mealy bug, red spider, and thrips, where they are quite safe from insecticides applied from beneath.

Grapes Colouring.—Nonrishment applied at this stage may not materially benefit the ripening fruit, but it certainly prevents exhaustion of the Vines where the crops are heavy. It should be of a sustaining rather than stimulating nature, such as dissolved bones, three parts; sulphate of potash, one and a half part; and sulphate of magnesia, half part, mixed, applying 4 ozs. of the mixture per square yard, and just pointing over the surface of the border, afterwards watering moderately. Thorough supplies of water are needed for the perfection of the crop, but excessive soil moisture tends to undue shanking, indifferent colouring, and is not favourable to the formation of the buds and ripening of the wood. A light mulch of spent material will promote uniform moisture and surface rooting. Outside borders may not be neglected where they have not been sufficiently moistened by the recent rains. Moderate air moisture is still required for the foliage, damping down the house in the morning and afternoon, but there must not be a close atmosphere.

The Kitchen Garden.

Broccoli.—This important crop ought now to be finally planted, selecting ground that is in good heart but firm. There may be some difficulty in inserting the plants, but holes can be made with a crowbar of sufficient depth to admit the roots straight down. Plant in rows not less than 2 feet apart, the plants being 18 inches asunder. Osborn's Winter White, Leamington, Cattell's Eclipse, and Late Queen form a good succession.

Borecole.—A quantity of these also may be planted out on any good, vacant ground. Water well at time of planting, and cover with dry soil. The Tall, and Dwarf Green Curled and Asparagus Kale are hardy and useful.

Savoys.—Dwarf, sturdy plants of Savoys should be accorded a good position in rich soil. Plant in quantity according to the demand. The Early Dwarf Ulm comes in useful if wanted in early autumn. Drumhead is a suitable main crop variety.

Peas.—Clear off exhausted haulm of early varieties, and place sticks to the latest rows. Those in bearing support with water, liquid manure, and mulch the surface alongside the rows with grass or manure.

Beans.—Scarlet Runner Beans, if grown on the dwarfing system, must be frequently stopped. Even when the points reach the tops of tall stakes they may be nipped off; this favours the setting of pods. Water copiously, and lay down a mulching of manure on each side the rows.

Spinach.—Early rows now run to seed clear off or dig in, occupying space with Celery, Winter Greens, Coleworts or Cabbage. Victoria Spinach, which produces large leaves, is a good variety to cultivate. Perpetual Spinach may also be sown now to stand the winter for spring use.

Celery.—Continue planting until sufficient rows are secured. Small and sturdy plants that have had no check and are well furnished with roots are best. Give a copious watering to settle soil, and afterwards as required. Trim off small leaves and suckers from early rows, the plants of which are of considerable size. Tie the foliage loosely together, and draw earth to stems. A few applications of liquid manure will be beneficial to these.

Turnips.—On a piece of good rich ground make a sowing of Chirk Castle Black Stone Turnips. Draw the drills and soak liberally with liquid manure before sowing, also give a dusting of superphosphate, which will induce a quick growth.

Lettuce.—The supply of tender Lettuce must be continued by frequently sowing small quantities at a time in moistened drills, where the plants are to stand. Bath or Brown Cos, Tom Thumb Selected, and All the Year Round are reliable sorts for present sowing. Thin out seedlings before crowding takes place.

Vegetable Marrows.—With adequate moisture at the roots and a free run for the latter in good soil, plenty of fruit will form and swell to a good size. Cut them before they attain a large size, being then much better for use.

Tomatoes.—Give frequent attention to the outdoor plants in regulating growth and rubbing off lateral shoots, chiefly confining the plants to one main stem. Sufficient supplies of water are also necessary, and afford liquid manure to heavily cropped plants. Tomatoes planted out under glass or grown in pots are now producing fruit freely. Top-dressings of rich material, aided by artificials, must be given, as well as occasional doses of liquid manure.

Cucumbers.—In houses and frames regulate the growth and cut out exhausted leaves and stems, stopping the shoots at the second or third joint. Top-dressings of loam mixed with decayed manure, a sprinkling of soot and native guano, all well incorporated, and spread lightly on the surface round the plants, will cause the production of fibrous roots in quantity. As soon as the surface of the mounds become dry, which will, as a rule, be daily, sprinkle liberally with water, and maintain a moist atmosphere. Fruits should not hang on the plants too long.

Melons.—While Melons are growing and swelling fruit maintain a moist atmosphere and a moist root-run to encourage activity of the roots. Not more than five equally sized fruits should be allowed on one plant, and superfluous growths must be rigidly subdued. As the ripening period approaches lessen the supply of water at the roots, and decrease the atmospheric moisture.

Obituary.

Mr. John Sim.

THE death of Mr. John Sim occurred on June 24th at his residence at West Cults. He was well known in Aberdeenshire and Kincardineshire as a highly successful florist and fruit grower. Mr. Sim, who was born in 1824—and had thus reached the advanced age of seventy-seven years—was bred to the gardening trade, but afterwards went into farming at Whitestripes. Whilst engaged in farming at Whitestripes Mr. Sim completed a botanical survey of Scotston Moor, which was published some forty years ago, and Dr. Alexander Walker, in his "Commonity of Perwinnis," makes hearty acknowledgement of the valuable work done by Mr. Sim in this connection. Mr. Sim afterwards removed to Gateside, Strachan, and during his tenancy there commenced on an extensive scale the cultivation of Strawberries. In this enterprise his example was followed by most of the farmers and crofters in the district, and by this means the severity of bad times was to a large extent discounted, and the district made the start towards its present well-known reputation as a centre of Strawberry culture. After having been tenant of Gateside for nearly twenty years, Mr. Sim bought a small property, known as the Temple, situated a few miles from Stonehaven, where he continued his business of florist and fruit grower. In the pursuit of his botanical researches Mr. Sim came in contact with most of the prominent botanists of the day. Latterly he had been living with one of his daughters at West Cults. His eldest son, Thomas, was educated in botany at Chiswick, Kew, and afterwards at Harvard University, United States. He was appointed to the Forestry Department in South Africa, where he was lately joined by his brother James, who is also an enthusiastic botanist. Another brother has taken up the seed trade. Mr. Sim had three sons and two daughters.

Phenological Observations.

JULY 5TH TO 11TH.

PLANTS DEDICATED TO EACH DAY.

5 Fri.	Chaffinch's song ceases.	Double yellow Rose.
6 Sat.	Old Midsummer Day.	Revered C. epis.
7 Sun.	G. worm shines.	Nasturtium.
8 Mon.	Lappet moth seen.	Evening Primrose.
9 Tu.	Shore beetle seen.	Marsh Sowthistle.
10 Wed.	Yellow under-wing moth seen.	Speckled Snapdragon.
11 Thr.	Elephant hawk moth seen.	Yellow Lupine.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Names of Plants (C. W. F.).—1, Veronica Teucrium dubia; 2, Veronica Teucrium. (J. C.).—Rubus odoratus. (A. P.).—1, Philadelphia microphyllus; 2, Geum chilense fl.-pl.; 3, Pernettya mucronata; 4, Pyrethrum Parthenium; 5, Lychnis Walkeri. (L. F.).—Liriodendron tulipifera, the Tulip Tree. (M. T.).—1, Boronia elatior; 2, Fuchsia Countess of Aberdeen (we do not undertake to name varieties of florists' flowers); 3, Vicia unijuga; 4, Callamintha grandiflora; 5, Allium narcissiflorum. (R.).—Oxalis corniculata atropurpurea, one of the finest of rockery plants. (U. L.).—Oncidium candidum; 2, Cattleya labiata Gaskelliana; 3, Cattleya labiata Eldorado; 4, Disa Veitchi; 5, Cypripedium Parishii. (J. B.).—The true Dendrobium moschatum. (A Weekly Reader).—Cattleya Mossiae.

Diseased Potato Tops (Shaw).—The tops are affected by the Potato leaf curl fungus, Macrosporium solani, which attacks the stem, usually close to the ground at first, and gradually creeps up, first causing the leaves to curl, and finally the stem also collapses. When the leaves first curl there is usually no external sign of the fungus, but at a later stage the stem and leaves become more or less studded with blackish, minutely, velvety patches, which represent the conidia or spores of the fungus on the surface of the host. The conidia are large, olive-brown, and divided into numerous cells by septa crossing at right angles. It is allied to it if not identical with the fungus causing "black stripe" on the Tomato. Spraying with Bordeaux mixture, as practised for preventing the Potato disease, hinders the disease from doing serious mischief, but to prevent the disease it is necessary to commence spraying early, say before earthing, again after the Potatoes have been moulded up, and again when the tops are nearly full grown or the chief growth made, or when showing for flowering. This treatment acts equally preventively of the Potato disease as well as against leaf curl.

Scum on Surface of Pond (G. T. B.).—The sample you have forwarded in a bottle contains some confervaceous plants, freshwater alga, numbers of the lesser rats-tail maggots, and also some eelworms. It must, indeed, be in a sorry plight, and far from wholesome to the neighbourhood, though the plants and animals will prevent offensive effluvia to a great extent. Possibly the best thing to do would be to turn on the water some ducks, East Indian, so that they may feed on the vegetable and animal growths, and by their constant movements as well as feeding so subdue the growths as to clear it of the scum, or at least render it more presentable to the eye. Ordinary ducks would answer, at least they did with us in a similar case, but the black East Indian ducks are much the more ornamental, and certainly quite as serviceable. If the ducks are not favoured, throw flowers of sulphur on the surface of the water, on which it will float, sufficient to form a thin scum, and this will probably have a good effect on the vegetable and animal growths in the water. We, however, advise the ducks, say four or half a dozen ducks and one drake to about every quarter of an acre of area of water surface.

Vine Roots and Leaves (R. W. D.).—The roots are decayed in places, and in some parts completely destroyed, so that the portion beyond the affection are of no further use. We examined them very carefully under the microscope, but found only bacterial bodies—namely, Bacterium lineola, which is present in most soils, especially the soil water and vegetable matter passed or passing into solution. This, however, is not pathogenic, and the injury has probably been caused by some other organism, probably eelworm, though it sometimes arises from the presence of organic acids, yet there does not appear any reason to suspect this state—that is, sourness of the soil—from the components of the border, which are quite sound. We should give the border a top-dressing of air-slaked lime and soot in equal parts by measure, applying half pound of the mixture per square yard, and point in very lightly, not disturbing the roots. The leaves have the appearance of attack by the Vine mite, Phytoptus vitis, but there was not the usual growth of crinens or hairs, but a reddish distortion of the tissues resembling rust. Nevertheless, we did not find the mite, or even the rust mite, Tarsonemus vitis, indeed no animal or vegetable parasite, but neither of the pests named are at times easy to find, nor always present on the affected parts. We should spray the Vine on the under side of the leaves with tobacco water made by placing 1 oz. of tobacco powder, as sold by nurserymen, seedsmen, and horticultural sundriesmen, in a vessel, and pouring on a quart of boiling water, covering closely, and let stand until cold, then strain, and apply by means of syringe with a spraying nozzle.

Diseased Tomatoes (A. A.).—You will find your query answered on page 5.

Foxglove Freak (C., Portsmouth).—Not uncommon, especially where the plant has, perhaps, been starved during a period of its growth, with better conditions when the terminal flower develops. Your raceme shows the terminal flower sporting into the "Gloxinia" type, with wide-open corolla.

Covent Garden Market.—July 3rd.

Average Wholesale Prices.—Fruit.

	s.	d.	s.	d.		s.	d.	s.	d.		
Apples, Tasmanian, case	9	0	to	12	0	Lemons, Messinas, case	9	0	to	12	0
Apricots, 20s., 24s. ... box	1	0	1	3		„ Naples	24	0	30	0	
Bananas	8	0	12	0		Melons, each	1	0	2	0	
Figs, green, doz.	2	0	4	0		Pines, St. Michael's, each	2	6	4	6	
Grapes, Hamburgh, lb. ...	1	0	2	0		Strawberries, lb.	0	4	1	0	
„ Muscat	2	0	3	0							

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green; doz. ...	2	0 to 3	0	Horseradish, bnch... ..	1 2 to 1 6
„ Jerusalem, sieve	1	6	0 0	Leeks, bunch	0 1½ 0 2
Asparagus, English, 100	1	6	2 0	Lettuce, doz.	0 6 1 0
Batavia, doz	2	0	0 0	Mushrooms, forced, lb. ...	0 8 0 9
Beans, French, lb.	0	9	10	Mustard and Cress, pnnt.	0 2 0 0
Beet, red, doz.	0	6	0 0	Parsley, doz. bnchs. ...	2 0 3 0
Broccoli, bush... ..	0	0	0 0	Peas, blue, per bus. ...	3 0 6 0
Cabbages, tally	1	6	3 0	Potatoes, cwt.	3 0 7 0
Carrots, new, doz. bnch.	4	0	6 0	„ New Jersey, cwt	8 0 9 0
Cauliflowers, doz.	3	0	5 0	Radishes, doz	0 6 0 9
Chicory, Belgian, lb	0	4	0 0	Rhubarb, doz.	1 0 1 3
Corn Salad, strike	1	0	1 3	Shallots, lb.	0 4 0 0
Cucumbers, doz.	2	0	3 0	Spinach, bush.	4 0 5 0
Endive, doz	1	3	2 0	Tomatoes, English, lb. ...	0 3 0 4
Greens, bush.	1	0	1 6	Turnips, doz., new	6 0 8 0
Herbs, bunch	0	2	0 0	Watercress, doz	0 6 0 8

Average Wholesale Prices.—Plants in Pots

	s. d.	s. d.		s. d.	s. d.
Acers, doz.	12	0	to 24 0	Fuchsias	4 0 to 6 0
Aralias, doz.	5	0	12 0	Geraniums, scarlet, doz.	4 0 5 0
Araucaria, doz.	21	0	30 0	„ pink, doz.	4 0 6 0
Aspidistra, doz.	18	0	36 0	„ King of Denmark, doz.	3 0 4 0
Grotons, doz.	18	0	30 0	Hydrangea panicula, doz.	18 0 24 0
Dracæna, var., doz. ...	12	0	30 0	Hydrangeas, white, pink	9 0 12 0
Dracæna, viridis, doz. ...	9	0	18 0	Lycopodiums, doz.	3 0 4 0
Erica, various, doz. ...	18	0	36 0	Marguerite Daisy, doz. ...	4 0 6 0
Euonymus, var., doz. ...	6	0	18 0	Mignonette, doz.	6 0 8 0
Evergreens, var., doz. ...	4	0	18 0	Myrtles, doz.	6 0 9 0
Ferns, var., doz.	4	0	18 0	Palms, in var., doz. ...	15 0 30 0
Ferns, small, 100	10	0	16 0	„ „ specimens	21 0 63 0
Ficus elastica, doz. ...	9	0	12 0	Pelargoniums	6 0 8 0
Foliage plants, var., each	1	0	5 0	„ „ Ivy leaf	4 0 6 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.				
Arums, doz.	2	6 to 3	0	Maidenhair Fern, dozen					
Asparagus, Fern, bunch	1	6	2	6	bnchs.	3	0 to 4	0	
Carnations, 12 blooms ..	1	0	1	6	Marguerites, white, doz.				
Cattleyas, doz.... ..	15	0	18	0	bnches	2	0	3	0
Cornflower, doz. bnchs....	1	0	0	0	„ yellow, doz. bnchs.	2	0	3	0
Eucharis, doz.	2	0	0	0	Mignonette, English, doz.	4	0	6	0
Freesia, doz. bnchs. ...	0	0	0	0	Odontoglossums	2	0	3	0
Gardenias, doz.	1	6	2	0	Roses, Niphetos, white,				
Geranium, scarlet, doz.					doz.	1	0	2	0
bnches	4	0	0	0	„ pink, doz.	1	0	3	0
Gladioli, doz. bnchs. ...	6	0	9	0	„ yellow, doz. (Perles)...	1	0	1	6
Gypsophila, doz. bnchs.	3	0	5	0	„ red, doz.	0	6	1	0
Iceland Poppies, doz. bnchs	1	0	2	0	Smilax, bunch	3	0	5	0
Iris, Spanish, doz. bnchs.	3	0	4	0	Stephanotis, doz.	1	0	2	6
Lilium lancifolium album	2	0	3	0	Stock, white, doz. bnchs.	2	6	4	0
„ „ rubrum	3	0	5	0	Sweet Peas, white, doz.				
„ „ longiflorum	1	6	2	0	bnches	2	0	3	0
Lilac, white, bunch, ...	3	0	0	0	„ coloured, doz. bnchs.	2	0	3	0
Lily of the Valley, 12 bnchs	12	0	18	0	Tuberose, gross	3	0	0	0

Next Week's Events.

Friday, July 5th.—Royal Botanical Society, lecture on "Plant Cultivation in British Colonies," at 4 o'clock p.m.

Saturday, July 6th.—Royal Botanical Society meeting; Société Française d'Horticulture de Londres meeting; Maidstone Rose Show; Sutton Rose Show; Reading Rose Show.

Monday, July 8th.—United Horticultural Benevolent and Providential Society Committees' meeting.

Tuesday, July 9th.—Wolverhampton Floral Fête (three days); Gloucester Exhibition; Harrow Exhibition.

Wednesday, July 10th.—Stambridge and District Rose and Horticultural Society Show; Thornton Heath and District Horticultural Society first annual (open) Show; Worthing Exhibition; Formby Rose Show; Warminster Rose Show.

Thursday, July 11th.—Bath Floral Fête and Rose Show; Eltham Rose Show; Helensburgh Exhibition; Woodbridge Exhibition.



Reaping Machines.

MACHINES which have been put away in good order, and kept clean, should require little preparation for the coming harvest, but where any serious repairs are necessary it is very advisable to take time by the forelock, and give the blacksmith or machinist a fair chance to do his work properly by allowing him a reasonable time to do it in. Where, however, the machine to be repaired is an old self-raker or manual, and the expense to be incurred is at all a serious one, the natural question suggests itself, "Is the old thing worth the expense?" If the bidding at auction sales is anything to go by, no old-type machines are worth repairing, for farmers will hardly make a bid for them, whereas for useful self-binders £15, £20, and £25 are sums often realised for machines in fair going order. There can be no doubt, in fact, that the binder has got a firm hold, notwithstanding all the prejudice engendered by farmers' conservatism and labourers' self-interest. Another fact which cannot be disputed is that binders are an absolute necessity, for the work of harvest cannot now be done without them, for the labour difficulty becomes more acute every day, and the time is probably not far distant when corn will be harvested in no other way. At any rate, the machines have the advantage of not striking for higher wages at inconvenient times, do not get drunk, and if kept in order are always ready when wanted.

A great deal has been made in the past of the over-tightness with which much of the corn has been bound when string has been used, and of the consequent difficulty of getting the sheaves dry again when once they have become thoroughly wet. There need be no difficulty of this kind, for with the newest machines the sheaves may be tied slackly as well as tightly, and with just a firm knot. Harvest men often used to tie the sheaves so slackly that half of them fell to pieces when touched by a fork. There is no such thing with slackly bound reaper sheaves, as, the knot holding, the sheaf can be lifted to the waggon without losing a straw. A great advantage of string-bound sheaves, especially in the case of Barley in showery weather, is the absence of sprouted corn in the band, and consequent superiority of the sample over a hand-bound one, for the latter generally contained some sprouted grain amongst the ears of the band if there were any in the sheaf at all. Another advantage of the binder is the greater symmetry with which the ears are kept to the right end of the sheaf; this is very important, as it tends to keep the ears from contact with damp soil and consequent damage.

The cleanness with which the grain is cleared from the ground is the most marked feature of string-bound work, and many farmers nowadays have little use for a horse rake except in the hay field. The corn also goes all into one stack, and there is no raking stack with its weathered and sprouted grain, fit only for poultry or grinding for pigs. In estimating the financial advantages of binders, the difference between the price of raking corn and best is a considerable item, for on a 400-acre farm, growing about 130 acres of grain, we have generally under the old system had at least 20 qrs. of rakings, worth from 5s. to 10s. per qr. less than the best; 20 qrs. at 7s. would pay for a new binder every five years.

Rearing Foals.

Breeders will soon begin to think of weaning their early foals, for many farmers require the services of all their brood mares during harvest, and if they can get the earlier foals weaned before harvest commences much trouble and risk is saved. In the case of mares which are likely to breed again there is also advantage in the early weaning of the foal, for any benefit to the newborn by protracted nursing is gained at the expense of the unborn. In any case a foal should be ready for weaning at five months old, but many are separated from the dam at four months. Much, however, depends on the foal itself. If it is strong and well grown it may be taken off much sooner than a weakly one. Weaning should have proper preparation. The loss of the mother's milk is at first greatly felt by the foal, and the effect is easily seen in the appearance of its coat and its condition; but if a foal has been early taught to feed from a crib with its dam, and is, for three or four weeks before weaning, fed with an extra supply of crushed Oats and bran, it will, on being separated from her, be trained to look out for itself, and if liberally treated little loss of condition will take place.

On being taken from the mare, or the mare from it, the foal should never be left until its excitement and distress have quite subsided.

All animals love company, and if someone stays with it for an hour or two, and talks to and pets it, matters will soon assume a settled appearance. The separation should be thorough, and so that dam and offspring can neither see nor hear each other. The mare, if she be full of milk, must be dieted for a few days, allowed no corn and not too much liquid, and gentle work is a capital thing to check the flow of milk. If, however, in spite of these precautions there is difficulty, the udder must be drawn now and then for a few days until the milk shows signs of disappearing. After the foal is weaned the state of its bowels must be closely watched, for the sudden change to hard food may cause slight derangement of the stomach, resulting in constipation or diarrhoea. Castor oil is a very safe remedy, and a dose the day after weaning and another a week later may save much trouble.

Edinburgh, Glasgow, and Adjacent Parts.

(Continued from page 550, last vol.)

The labour question appears not to be so troublesome here as in England, and the milking gets done easily. The wives and daughters of the men milk at the rate of 5s. per week, and they are expected to milk three times a day. Shall we have to import Scottish milkmaids to meet our difficulty? And about the food for this stock. Rye Grass and Timothy, selling per acre for £18 to £20 first cut, then manured with half a ton nitrate, and then second cut sold for £12. That looks like making money. But the land round these two cities is among the best in Scotland.

Mr. Lloyd, the chemist to the association, read a paper on Cheddar cheese, and, as far as we can read between lines, Mr. Lloyd thinks a cheesemaker must be born, not made. A cheesemaker must have skill, knowledge, and research, and in face of the enormous competition with Canada, U.S. America, and New Zealand, nothing but the very best must be made here. What we want are competent teachers, men who would spend a portion of their time in original research, and who would unravel the many problems brought beneath their notice from time to time.

Loch Lomond, Inversnaid, the Trossachs, Loch Katrine, and Dalkeith Palace were places visited, presumably as recreation. Well, after some stiff papers, some change was desirable. We read of excursions up the Clyde, visits paid to beautiful nurseries, and we know one party of fortunate men who went over that perfect home farm at Dalmeny. We think Lord Rosebery bids fair to turn Dalmeny into a second, or rather a Scottish Rothamstead. Potato culture is a great industry of Scotland, and much time is given at Dalmeny to experiments with this useful tuber.

There is in Edinburgh a most useful society called the Edinburgh and District Dairy-keepers' Association. They have a president, vice, law agent, and analyst, and a secretary, and that secretary is a lady, Miss Ramage. Her name was on the toast list, and, as we should expect of a lady, was—well, we don't want to make the gentlemen uncomfortable, but it will be long before they are as concise and practical.

There was one farmer visited, Mr. Fisher of Whitehall, who retails all his milk to private customers at 1s. 4d. per gallon. Having much of the Jersey element it is naturally rich, but (and this is his strong point) it, or rather all his cows, are absolutely free from any touch of tuberculosis. Not one of his cows but has stood the test, and as he keeps nothing but stock of his own breeding, means to preserve them in this state of good health.

We have only touched just the very edge of the topic, as it were. It is impossible to compress into a short column the good work done, the good speeches made, and the pleasant friendships formed and renewed that spread over a series of five days. There is some talk of an expedition to Canada next year, but Canada and next year are a long cry. We see Mr. Hanbury has published his milk standard. We fancy some of the members of the congress will not quite approve. Alas! Mr. Hanbury is but a mortal man, and no angel could draw up a proposition that would please everyone.

Work on the Home Farm.

The copious rains of the past week give great cause for thankfulness on the part of the farming world. Here and there a crop of Clover may have been spoilt, but the general benefit must be almost incalculable. The rain has been followed by dull cloudy weather, the conditions gradually becoming clearer, and to-day has been distinguished by bright sunshine. The most material gain will be in the crops of straw, the Wheat and Barley, which are partly shot, apparently make no progress; but, as we have noted before, it is the straw which is lengthening and keeping pace with the ear. The stackyards should now be fairly well filled when the last load has been carried. We have seen some very light pieces of Wheat lately, and there are far too many Poppies and similar weeds visible among the crops. Barleys are much more satisfactory, being very even in growth, and of quite length enough for the production of fine samples. This crop is decidedly more promising than last year. Oats are improving, but shortness of straw will affect

the crop more adversely than it will Barley. Oats will not bear even a suspicion of drought.

The effect of moisture on the root crops has been very great, and we fancy that little more will be heard about the fly for the present. Where crops have been spoilt beyond redemption there is still ample time for resowing. July 12th is a date on which many a fine crop of Green Glove has been sown. There need be no hurry to cut the hay yet; the bottom grass will lengthen much now, and it is the most valuable portion of the crop. Besides, all hands on mixed farms are now urgently needed amongst the Turnips. The skerries must be kept at work between the rows, and the hoe will be wanted in every field at once. To grow good roots we must keep stirring the surface to give air to the roots. The horse hoe must be set to run as near to the plants as is practicable. A plant here and there may suffer, but the remainder reap the benefit, and a Turnip which is easily knocked up is not worth much.

Potatoes are making glorious progress—i.e., the later crops. Early ones have been too dry, and are yielding badly. Reports of serious damage by frost reach us from some parts; we are thankful we have escaped.

Plan to Feed England.

J. M. SMART, who is connected with the Southampton Cold Storage Company, which has recently erected a 2 000 000 dols. plant at Southampton near the docks, arrived in New York on the American liner St. Paul recently. Mr. Smart is the president and general manager of the American Cold Storage and Shipping Company, whose offices are in the Produce Exchange Building. This concern is the parent of the Southampton company, says the "New York Times." Besides the warehouse at Southampton, the company also has a mammoth establishment at Manchester. The Southampton plant will be operated in conjunction with the London and South-Western Railroad, which is having constructed modern refrigerator cars for the service, which it is expected will be in working order in a few months. The warehouse in Manchester is run in conjunction with the Manchester Ship Canal Company. Fourteen other warehouses are soon to be opened in England. Each plant of the system will store goods worth 10,000,000 dols., so that when all of them are stocked they will contain in the aggregate merchandise worth about 160,000,000 dols. England imports yearly farm products to the value of 200,000,000 dols., which mainly come from the United States, Canada, New Zealand, and Australia.

When seen, Mr. Smart said that he had been abroad about three months in connection with the affairs of his company. He said it was about to begin business on a most extensive scale, and that it had behind it sufficient capital to make it a success. "The feeding of the people of England," said he, "is a vast undertaking, because they consume annually 1,000,000,000 dols. worth of foodstuffs, which have to be supplied by other countries. The supplies kept on hand would only feed the English people for thirty days, and were her coast menaced by a hostile fleet, and her 712 merchantmen kept from landing there, the country could be starved out in less than five weeks. The English people are aware of this, and now food-carrying vessels are subsidised, as well as the mail carriers. This is done by putting in the mail-carrying contract a clause that the boats must be provided with certain dimensions of food and cargo-carrying space. The United States should naturally be the feeder of England, and the American Cold Storage and Shipping Company cannot but be successful when it removes the disadvantages which at present exist.

"This we intend to do by running from New York, Philadelphia, and other Atlantic ports our own lines of steamships, all of which will be provided with the best of cold-storage facilities. Dairy food supplies which we intend to handle will then reach the English markets in first-class condition, and on account of the cheapness in transportation and handling we will be able to undersell our rivals, and at the same time furnish a better article. We can also keep on hand enough dairy or farm products to last at least six months in case of necessity. We will at first only handle supplies of that sort of which England imports 200,000,000 dols. worth annually. That will be a big trade in itself, and of course the market will increase as our facilities will be enlarged. We will have two centres of distribution—one at Southampton, which will supply London and the south of England, and the other at Manchester, which will cover the entire north of England. As the terminal facilities will be perfect, the other sections of England will be supplied by the railroads by means of refrigerator cars from our other cold-storage plants.

"Our shipments will be enormous, and will be direct in reaching the consumer. Products such as fruits, fowls, butter, cheese and eggs, are to-day about 700,000,000 dols. worth, and there is no reason why this cannot be increased a couple of hundred million dollars more when we are able to sell these things in England in the same condition as sold in the home markets. Argentina simply sells lean sheep to the people of the north of England, but this sort of mutton cannot be disposed of in London, where fat mutton is in demand. The English people were alarmed when they learned of the Morgan deal in ships, which as yet they are unable to understand. Our company is a New York corporation, and the whole scheme is an American one."

WEBBS' EMEROR CABBAGE

THE EARLIEST AND BEST.

Seed, 6d. and 1/- per Packet; 1/6 per Ounce.

From ALBERT MITCHELL, Esq., Linden House, Ringwood, May 4th, 1901.

I have much pleasure in sending you photographs of Webbs' Emperor Cabbage and also of a variety which I was recommended to test alongside it. The variety in question was represented as a "Wonderful" Cabbage, and I was charged a much higher price than yours for the seed. I thought I had something to beat your Emperor, as I always want to get the best stocks to supply my contracts. I treated both alike and planted them out at the same time, planting 6 ranks of 550 plants of the "Wonderful" new variety beside the ranks of Emperor; this I repeated four times across the field of 10 acres, thus each had an equal chance. You can see the result by the photographs and also from the following: Result of WEBBS' EMEROR: Scarcely a plant bolted. Began to cut March 11th, 6000; March 13th, 2400; April 10th, sold 40,000, buyer to cut as required and I am now selling daily. Result of the "Wonderful" new variety. Quite 50% bolted—see photograph; of the remainder there is no sign of any fit for cutting, in fact my foreman wants me to run the plough through the 24 ranks as they make the field look so bad. No more of the "Wonderful" new variety for me; I would not have it as a gift.

WEBBS', WORDSLEY, STOURBRIDGE.

PRIMULAS! PRIMULAS! PRIMULAS!

Williams' and other superb strains, also Primula Obconica, CINERARIAS and BEGONIAS, 1/6 per dozen, 10/- 100. Double White Primulas, 6d. each. All the above fit for 3 and 4-in. pots, and carriage free for cash with order.

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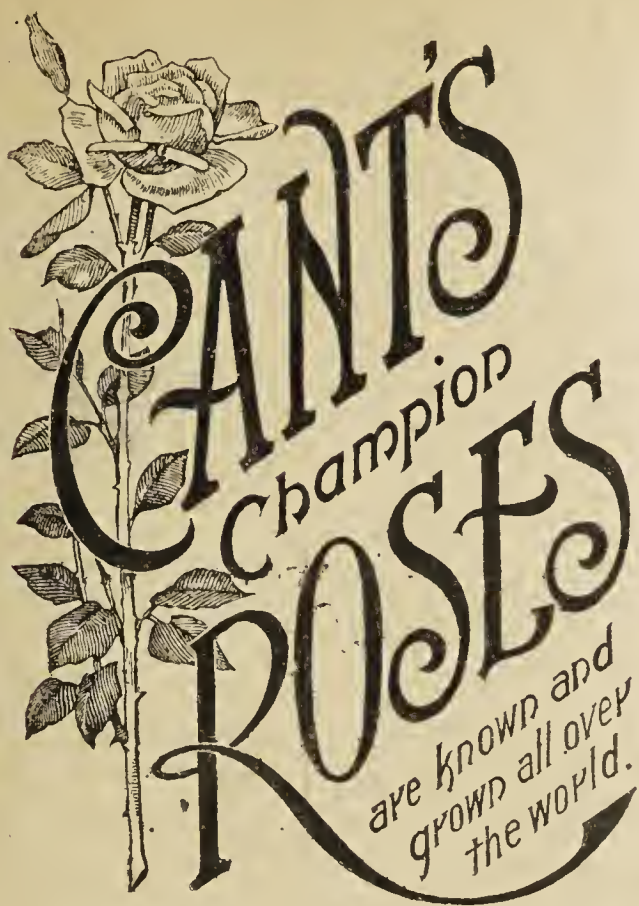
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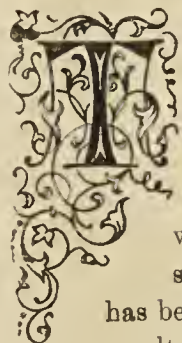
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Journal of Horticulture.

THURSDAY, JULY 11, 1901.

Rose Cogitations.



THAT the present season is a good one for Roses no one will dispute, I think, and the promise of a rich harvest of blossom will be borne out fully by results within the next few weeks. Roses love an abundance of

sunshine, and where the cultivation

has been of the right character no harm has resulted from the lapse of rain during the

last two months. Proper attention to the wants of

Roses at the right moment will give the right

results, in the same way that lack of attention is as

certain to end in failure as daylight follows dark.

Hence it is during such a spell of drought as we have

lately experienced that we get proofs of what good

culture means and what it is. If we consider newly

made plantations, or those of two or three years

establishment, the principle is just the same. Perfect

culture commences when the beds or borders are

deeply trenched as early in October as possible, so

that some time is allowed for the settling of the

soil into its natural position as to height before

planting is done.

I am a firm believer in early planting. Roses

are unlike many other subjects in this respect, they

do make fresh roots in the autumn after planting,

and this is an advantage I think none will deny.

Abundance of manure added at trenching time to

all kinds of soil is an absolute necessity to insure

success. An addition of clay and freshly cut turf

to soils of a light character is a distinct gain,

indeed the latter is a distinct gain to any soil.

These are the rudiments of good culture at the com-

mencement. Then it must be noted that established

plants need further aid as compared to those but

recently planted. We often hear serious com-

plaints, after such a spell of drought as the present,

about mildew attacks and deformity of the flower

buds consequent upon the prevalence of this fungus,

and this in spite of the daily dustings of the leaves

with flowers of sulphur or the washing of the plants

with some nostrum that is supposed to eradicate

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the pest. Such treatment is like massage for an internal complaint, where an inward application of medicine is the only sensible means of cure. I compare mildew attacks of Roses with that on Peas. If no remedy is taken to prevent its inception, how can it be avoided I would ask? Prevention rather than cure is the motto to adopt. Taking the present season as an example, the careful cultivator early in May mulched the surface about his Roses with half-decayed manure, covering it again with fine soil, decayed vegetable refuse, or some such substitute, just for appearance sake, and to prevent the birds scratching it about. Such an addition to the surface prevents the evaporation of moisture from the soil, and keeps the roots cool, thus enabling the plants to carry out their proper function.

My excuse for going so fully into this phase of Rose culture at what may appear to some an inopportune moment is, that I am conversant with far too many instances of mismanagement in this detail. By a perusal of these notes those cultivators who have not hitherto realised the importance of early mulching may in the future be led to change their method, and by this a brighter result may be forthcoming.

One point about Rose culture that astounds me is the ignorance displayed by many who ought to know better. Many bushes receive careful tending, and surprise is evinced when such do not repay by giving a wealth of blossom, when close inspection would prove that nothing but the stock—Brier or Manetti—is being so carefully pruned and tended. This is no imagination, but a stern fact, as any rosarian has experienced when inspecting the collection of many an enthusiastic amateur. The ignorance displayed, too, by many gardeners in this detail is to me astounding. Even when such do not actually come under the category of the innocent in knowledge, they leave such growths upon the plant far too long, robbing and sapping needlessly its energy.

How pleasing it is to see the welcome change that has come over the Rose grower of to-day as compared with those of fifteen or twenty years ago; I mean in the matter of the selection of types and varieties of Roses and the manner of staging many of them at shows. Nowadays Roses are grown for the beautifying of a garden as a whole by the selection of varieties and types not dreamt of in the days alluded to. I do not mean to infer that the cultivation of H.P. varieties for exhibition has in any way diminished—on the contrary; but, by the introduction of so many free flowering and perpetual blossoming sorts, there is such a vast increase in the rosery. So often now do we see whole beds, and huge beds too, filled with one variety only, that would be quite useless in competition with the more strictly florists' varieties, yet, at the same time, such a display is most showy and pleasing to all concerned. For example, take a bed of *Gustave Regis*, *Gruss au Teplitz*, or one of the Hybrid China varieties, what could be more beautiful as a garden ornament?

In cultivating such varieties exclusively the would-be exhibitor need not be deterred from a hobby, as there are at nearly all summer exhibitions classes for such types of Roses. I venture to say, too, such a class provides more interest for the visitor at shows than the more formal looking H.P., or even the handsomely formed and chaste-looking Tea-scented varieties. The cultivation of what are commonly known as "garden" Roses is a step in the right direction when we consider all phases of culture, opportunity, and means of the would-be grower.

As far as I know there is no authentic definition of what constitutes a "garden" Rose. Even the N.R. Society do not stipulate what are the terms of such a variety. To my mind it is a safe appellation to define a "garden" Rose as one that would individually take a place in a collection for a defined number of blooms. For example: *W. A. Richardson*, *Crimson Rambler*, or *Carmine Pillar* are all beautiful varieties in their way, but as individual flowers possessing no virtue to the florist as an exhibition variety. Such a class embraces a wide sphere, taking in all single-flowered varieties, Moss, small-blossomed Tea-scented sorts, China, Provence, Damask, Brier Roses, Banksian, and evergreen kinds. For the ornamentation of a garden, large or small, such a type or class as indicated is most valuable. What more beautiful object in a garden is there than an arch, pillar, or screen

covered with such free flowering varieties as the charming pink of *Euphrosyne*, the glowing crimson and carmine of *Crimson Rambler*, *Carmine Pillar*, the delicate blush of *Ranunculoides*, the nankeen tint of *Claire Jacquier*, the pure white of *Aimée Vibert*, or the richly yellow anthered blossoms of *Rosa brunonis moschata*?

For a mass of blossom of one colour in separate beds, or edgings to other beds or borders, what can excel such typical dwarf growing, yet hugely flowering sorts, like *Gloire-des Polyanthes*, *Cramoisie Superieure*, *Mrs. Bosanquet*, *Madame Anna Marie de Montravel*, *Red Pet*, or the glowing crimson of *Marquise de Salisbury*? Even the lover of single flowering Roses can make an equally good selection of such sterling varieties as *Cooling's Crimson Bedder*, *Hebe's Lip*, *Macrantha*, *Paul's White* and *The Lion*, not forgetting the various varieties of the *Rugosa* type. Many more points in Rose culture are before me in my cogitations, but I fear I have already trespassed too far on your valuable space, that they must perforce stand over for a future opportunity. One point, however, of importance at the present moment of exhibiting I would impress is that of correctly naming all exhibits. Those who are careless in this do not thoroughly appreciate the harm they are doing, though inadvertently it may be. A visitor sees a variety in a prize exhibit with which he or she is enamoured; the name is jotted down, a plant ordered, but, lo and behold! when the time comes round for blossoming, quite a different sort is in hand. The nurseryman sent according to name, hence the error and disappointment which must of necessity ensue.—E. MOLYNEUX.

Cherry Time.

EXCEPT in the words of a popular song, the cry of "Cherry ripe" is seldom heard in these days. Like many once popular London street cries it has passed away, though there never was a time when so many Cherries found their way into the metropolis, nor has the luscious fruit ever been more sought after than it is to-day. Before these lines appear in print the rush of the Cherry season will be full on, and evidence of the fact may be found both in London's crowded streets and in the leafy orchard lands of Kent.

I question whether many people living outside the latter county have a true idea of the magnitude and importance of the Cherry industry. Weeks ago the first tempting-looking berries appeared in the shop windows, and the man in the street at once gathered the impression that, like all the rest of the early produce, they must have come from abroad. It is more than likely he was right, for early Cherries are largely imported from the Continent, and this season the samples have been very good. The Kentish growers do not appear to mind this competition very much, for most of the foreign fruit comes in before the native produce is fit for market, but when the latter is ready it claims the monopoly. At the same time I am not sure whether home growers are not too willing to let the foreigner have the early market without making an effort to get a share of it. Some have paid attention to the importance of planting early varieties, and a few weeks ago I saw some splendid samples of *Early Rivers* sold at a price that must have been highly remunerative.

When the early supplies are over, and the season is in full swing, perhaps the average purchaser does not realise what a business the work of production must be. He sees great piles of Cherries on the costers' barrows, and vaguely wonders where they all come from, without considering that he sees but a small item of the whole. In short, Cherry growing for market is a distinct branch of fruit culture. The private gardener, who has a few trees, and grows for the supply of the dessert table, knows very little of it, and to become initiated it is necessary to get about in the district that probably grows more Cherries than all the rest of the country put together.

So much has been written of late years about the bad methods of English fruit culture that it may sound strange to hear something in support of the ways of the home grower; but in the case of Cherries it is justified. There are miles of Cherry orchards in Kent that are a credit to the growers. No methods could be better than those on which the trees are planted and cultivated, and the means are justified in the end by the splendid crops of fruit that are obtained. You may take *Sittingbourne* or *Maidstone* as your centre, and work in any direction, where you will find orchards planted with geometrical precision, trees shapely and well balanced, and flourishing in a manner that is suggestive of the fact that the conditions are highly favourable for the fruit. Orchards of young trees point out that planting is on the increase, and that the Cherry industry is growing; orchards of established specimens show trees in their prime, and orchards of veterans give you an idea of the lasting powers of the Cherry under suitable conditions, for gigantic patriarchs are to be seen, with mighty trunks and gnarled limbs, which, perhaps, produced fruit for London when the cry of "Cherry ripe, Cherry ripe," was familiar in the streets of the metropolis.

Weeks ago, even before the May Duke and other early varieties were ready for picking, there were indications that the important season was about to open. Bills and posters appeared in conspicuous places announcing the Cherry sales, for let it be understood that every grower does not pick and market his own fruit. The auctioneer plays his part here, as well as the speculator, for the fruit in many orchards is brought under the hammer as it stands, and knocked down to the highest bidder, who has then to pick and market the Cherries, and look after his own profits. It requires some judgment to be able to form a correct idea of how much fruit a certain orchard will produce, and to set a value on it; but the bidding is invariably brisk, and the prices obtained for certain orchards will often steadily mount up to hundreds of pounds. Anybody but an experienced Cherry buyer would naturally hesitate to speculate so much money, and take the risk; but the men know their business, and what is more, they are acquainted with the orchards and understand their capacities. Bad deals, of course, are not uncommon; but, generally speaking, the buyer knows what he is about, and comes out on the right side.

In the Kentish Cherry districts picking is an important business. Last year there was a great outcry for labour, but this season I have not heard so much of scarcity, which seems to point to a slackening of trade in other directions. As soon as the redness appears on the early fruits, the first move is made. This consists of long ladders, very broad at the bottom and tapering at the top, being brought into the orchard, then piles of round sieves appear in various places, very often a round bell tent as well for the accommodation of packers in inclement weather, and, of course, the patrol with his gun. The latter is most essential, for ripening Cherries are too tempting for the feathered tribe, that would soon play sad havoc if protective measures were not adopted. The Cherry tender has to be on the alert too, for while he is looking after the fruit at one end of the orchard, the thieving birds are stealing it at the other, and long before half the world is awake the sound of shooting is heard on every side, and this continues through the day and until evening is lost in the darkness of night.

These notes are being written after a series of journeys made in the heart of the Cherry district, but I will attempt no word pictures of the beauty of the orchards with the bright red fruits peeping from a canopy of foliage. The beauty of the sight is only equalled earlier in the season, when the trees are sheets of living blossoms, and nothing in Nature could be more charming than that. Now the effect is somewhat spoiled by the heads of half a dozen country women peeping out amongst the branches, engaged in the all-important work of picking. I fancy some ladies of nervous temperament would hesitate some time before mounting a ladder and climbing amongst the branches of a tall Cherry tree. But the women and girls of Kent think little of it. A large quantity of the fruit is picked by females, and the gossip and the laughter that proceed from the orchard give evidence that nerves are not considered much. The men fix the ladders and attend to the packing, but the wives and daughters do most of the picking, and with baskets slung over their shoulders they trip up the tall ladders, and seem as much at home amongst the branches of a high Cherry tree as they do on terra firma beneath. Naturally the growers prefer local labour, and it is not much use calling to chat with the good-wife of the rustic labourer during Cherry time, because it is a hundred to one that she will be out in the orchard. But there is a moving community also about when the picking season is on. Some work their way down from London, some come from the neighbouring towns, and it is not difficult to distinguish them from the native element. The other day I was wheeling my "bike" up a hill in a Cherry-growing district, when I was accosted by several men with wives and families in tow, who inquired the way to a certain farm, and asked in tones highly suggestive of Mile End Road whether I thought there would be any chance of a job of picking up there. Of course I couldn't say, but I think I should hesitate about trusting a Cherry tree of mine in such hands if there was any alternative.

And this business goes on till all the Cherries are picked and disposed of. First the May Dukes and other early varieties, followed by the Bigarreau, Amber Hearts, Black Hearts, and the rest of them, so well known to Kentish growers, and the Morellos to finish up the season. But the business does not begin and end in the orchards. The drays, loaded with sieves, rattle away down the quiet lanes, railway vans swallow them up, the market claims them next, and they go this way, that way, every way, in order that the million may have its Cherries. It is a great business, that Kent may practically claim as its own. Crops are good, heavy, indeed, in some places; but no matter how many Cherries there are, you never hear sad tales of no returns, and fruit is never allowed to fall to the ground, as was the case with other stone fruits last season. This speaks volumes for the popularity of the Cherry, and judging from the number of young orchards to be seen on every side coming into bearing, there is no reason to think that Kent in the future will be at all behindhand in the matter of supply.—G. H. HOLLINGWORTH.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

MUCH, no doubt, will be published in print from various sources, conveying many opinions of numerous thinkers, bearing on the grand, and one ought to say magnificent, show of the National Rose Society, which passed off with such splendid success on Thursday last in London. We need not pause to consider the objections or lack of interest which a few of the National Rose Society's members—and hitherto valuable members—have shown, because the Society has refused to go down to the Crystal Palace, as in years past. Thanks to Dean Hole, Rev. Honeywood D'Ombra, Mr. Edward Mawley, and a number of other enthusiastic and highly valued workers of the Society, this

Temple Rose Show

of the National Rose Society passed with the utmost satisfaction. There has been suppressed anxiety—a patient waiting, hoping, watching, and eagerness on the part of the many men to be in one way or another affected by this midsummer event. For a week preceding the show one was conscious of that mystic "something in the air," which was only lifted away when the clearing-out bell rang on Thursday morning, and the first "Temple" Rose Show was complete and ready for public opinion. The weather during the days immediately prior to the show were such as to furnish cause for anxiety amongst intending exhibitors, for heavy rains and thunderstorms, accompanied by stiff winds, came down of a sudden, and certainly had no influence for good. Still, although many entries were below par, the show on this occasion was the most enjoyable, the most beautiful, and from nearly every point of view the best show ever held under the auspices of the National Rose Society.

The arrangements were perfectly planned, and proceeded like clock-work. Her Gracious Majesty Queen Alexandra, as patroness, honoured the Temple exhibition by her presence, with that of her suite, and not for a very long day will the deserving and striving society of rosarians forget her Majesty's kindness. The Queen leisurely inspected the exhibits along all the tables, being under the escort of the Very Rev. the Dean of Rochester and Mr. E. Mawley. The new rambler Rose bearing the title of Queen Alexandra, from Messrs. J. Veitch & Sons, Ltd., gave her immense interest, and her Majesty discussed its merits for some minutes. An exhibit of twelve vases of this new gold medal seedling had been effectively arranged. Before her departure the Queen was presented with a massive bouquet of Roses in two appropriate pink varieties—to wit, H.P. Her Majesty and Queen Alexandra Rambler. Then, in the afternoon the élite of London society came, and wide though the tents and spaces between the tables were, at times there was more squeezing than was good for the ladies' lovely and expensive gowns, or their own likes. Everyone seemed delighted, and how pleasant it must have been to the real rosarian to hear many voices utter the remark that "one never gets tired of looking at Roses."

Maman Cochet variety was especially well shown in all parts of the show, and for a time this name was in everybody's mouth. This was far and away first; but Bessie Brown, that beautiful new H.T. sent out in 1899 by Messrs. Alex. Dickson & Sons, and which secured the silver medal as the best bloom in its section staged in the amateurs' classes, was also a great favourite. Pink Hybrid Perpetuals, as represented by Her Majesty, Mrs. John Laing, and Ulster, were frequently the subject of very special comment; but such others as Alfred Colomb, A. K. Williams, Captain Hayward, Clio, Dupuy Jamain, Eugénie Verdier, Fisher Holmes, Gustave Piganeau, John Stuart Mill, Louis Van Houtte, Madame Gabriel Luizet, Marchioness of Downshire, Marchioness of Dufferin, Merveille de Lyon, Mrs. Sharman Crawford, Suzanne Marie Rodocanachi, Tom Wood, Victor Hugo, Victor Verdier, and Xavier Olibo, were the recipients of spontaneous praise from numbers of the visitors.

Of course the Hybrid Teas received great attention, and such lovely varieties as Captain Christy, Clara Watson, and especially Kaiserin Augusta Victoria, were the cause of many ecstatic outbursts. Gruss an Teplitz, Gustave Regis, and the exquisite lilac-pink Killarney, were also much admired; and indeed there were many others that could not but be adored, so beautiful were they, as L'Innocence, Marquis of Salisbury, Marquise Litta, Mrs. W. J. Grant, Viscountess Folkestone, White Lady, and Tennyson. As a Tea-scented Rose Mrs. Edward Mawley showed up most magnificently; it builds a large and handsome flower. The Noisette Roses, and the large section of pure and true garden decorative varieties, attracted throngs of visitors during the long afternoon. The heat under canvas was very great, and told severely both on the flowers and their admirers. The exhibits were on the usual 3 feet tables, covered with baize, back to back, in three marquees, each about 150 feet in length, and arranged like the letter L. There was a very respectable spread of canvas. All of the ground space between the central and side tables was laid with boarding, nice to walk upon in two of the tents, but the flooring in the north tent was both an eyesore and dangerous as well. This was through using new wood and freshly made "flats." It would be unkind to conclude without a small recognition of the valuable services rendered by Mr. S. T. Wright of the Royal Horticultural Society's Gardens, Chiswick. He was active early in the morning and till late at night.—WANDERING WILLIE.

Wild Flowers of Old English Gardens.

"PRIMROSE" and "violeting" being over, those who did not profess to be botanists, yet liked searching for wild flowers, formerly went to seek Orchids during May and June. Many of them occurred in woods, specially on the chalk, and Londoners often resorted to woods on the east of the town of Dartford, or to others near Rochester. But since a profusion of curious and beautiful Orchids from other countries have become familiar objects, the enthusiasm as to our own wildings has been rather cooled off. Again, owing to the persistency with which dealers and greedy collectors have hunted up rare natives, a search for these is apt to be very disappointing in its results. No doubt, too, some plants have vanished, because their erstwhile woodland haunts have been brought under cultivation.

Writing upon horticulture in the reign of George IV., Loudon had nothing to say as to the management of exotic Orchids; they were almost unknown. Upon the growth of British species, he remarks that they do best in a mixture of loam and peat, with a little chalk; and, if raised from seed, these should be sown directly they are ripe. It matters not much, but we may speculate as to which of our native species, not despicable in number, though nearly all of small size, was the first to be admitted into the garden. We might say something in behalf of the early Purple Orchis (*O. mascula*), it being a common species, well known to our ancestors, and occurring formerly in many woods or copses close to the metropolis. Very recognisable was it by the shining green, black-spotted leaves, and the spike of purplish crimson; now and then a plant was discoverable with white flowers, and removal did not alter these. Flowering in May or earlier, this Orchis was one welcome sign of the approach of summer; an objection to it was the unpleasant smell it often exhales towards evening. Though some have disputed the point, it seems probable that the flower is the "Long Purples" of Shakespeare and old authors; also it is one of the many that have had the name of "Cuckoo Flower" given to them. Mr. Friend states there existed in Germany at one time a belief that wherever the Purple Orchis grew abundantly the earth beneath was rich in metal.

Then there is the Spotted Palmate Orchis, *O. maculata*, having a paler spike of crowded blossoms marked with purple; it is found along pastures and in woods, Epping Forest for instance, which would attract notice; it flowers later than the preceding. Even now, a botanist reports it as abundant upon some meadows, as Buttercups and Daisies; the plant occurs more frequently in modern gardens than does *O. mascula*, and grows taller. A shady border suits this species, where, if planted in moist deep loam, it forms very handsome tufts, being best propagated by division. The older gardeners took note of the curious fact that some species in the Orchis genus have two tubers at the root, and when one dies the other develops an offset, the result being that a plant changes its position slightly year by year.

There are two other species which, though now somewhat local, were at one time rather generally distributed, and which would be conspicuous to those seeking plants of the family for garden adornment. One is *Orchis militaris*, and its variety *O. fusca*, popularly the Military or Brown-winged Orchis, called also by some of its early admirers the Lady Orchis, on account of its elegance; perhaps it is, on the whole, our finest British species. Its tall stem, topped by a dense spike, and only leafy near the earth, was evidently suggestive of resemblance to a soldier. It is partial to chalk hills, and flowers in May; dried, it has a fragrance resembling that of the Woodruff. Then there was the dull-hued Lizard Orchis, *O. hircina*, of singular aspect, though not much like a lizard, having a spike of from twenty to sixty flowers, of unpleasant odour, which has been hunted up till it has become very rare; this is a fine species, flowering during July. Considering the peculiarities of the Orchis tribe, it seems remarkable that few of them, so far as we know, had repute for curative qualities or magical powers.

The Marsh Orchis, *O. latifolia*, is an ornamental species, which has been improved by cultivation, but it requires a moist soil, and was not much grown in gardens until recently, because its management was not understood. It has a close, many-flowered spike of purplish crimson, rising from a strong stem, which may nearly reach 2 feet in height; the leaves are occasionally spotted with blackish purple; the roots are palmate. Sometimes we see it in bog beds beside the Lady's Slipper, *Cypripedium spectabile*; it blooms during early summer. Formerly it was easily obtained from marshes or moist meadows near London, and it is still common about South England. Another species fond of damp places is the green-winged Orchis morio, growing profusely in some grassy meadows, its flowers purple, violet, or nearly colourless; this is a fine species, and occasionally patches of it were planted in gardens, though not specially attractive.—J. R. S. C.

The Herbaceous Calceolaria.

I HAVE often wondered why this most useful old favourite is not more generally grown, especially where masses of bloom are required during the months of May and June, as I think during these two months it is at its best. To obtain May plants seed should be sown about the first week in July, using a mixture of finely sifted loam, leaf soil, and peat in equal parts, with a liberal addition of sharp silver sand, merely covering the seeds after sowing with a sprinkling of soil shaken evenly over them through a hair sieve. Having watered the pans or pots, tie a piece of paper lightly over them and stand in a frame, one having a north aspect if possible, and keep close until the seed germinates, when the paper must be removed, and the seedlings gradually introduced to the light, being careful to avoid bright sunshine, as a few minutes of this will prove fatal.

This is the most critical time for them; careful attention must be paid to keep a moist, cool atmosphere in the frame, and, if possible, avoid watering them until they are almost large enough to prick off, then do so by immersing the pans up to the rims in soft water until the water thoroughly soaks the whole mass. By about the first week in August the seedlings will be ready for pricking off. The best plan at this stage is to put them at the rate of about five round the edges of 3-inch pots, using the same mixture, with the addition of a small quantity of finely sifted cowdung. After this they can be placed in a frame in an exposed position, where they can be shaded from direct sunshine, but still have the advantage of full light, in the absence of sunshine. If they are well watered after pricking off, very little more will be required until they are ready for their next shift, if the frame is kept moist by damping once or twice a day and spraying the plants slightly overhead in bright weather.

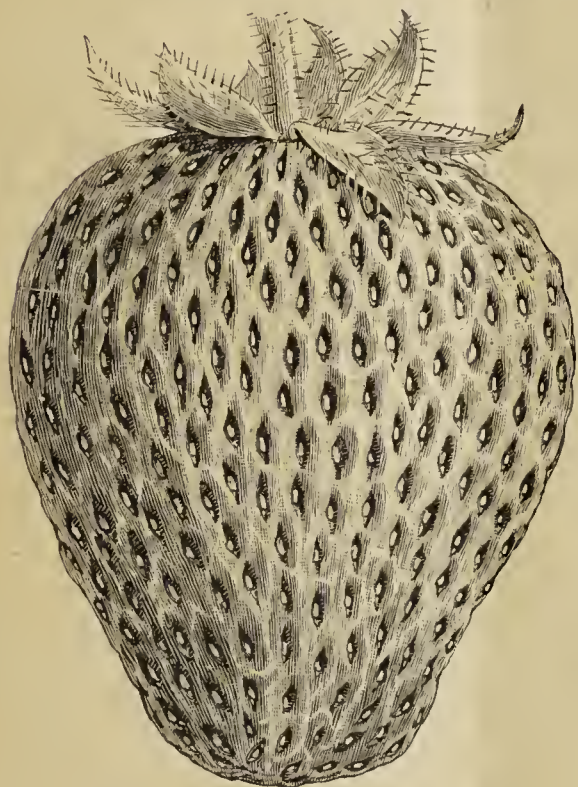
In about a month they will be ready for potting off singly, using 60-size pots, well drained, and a mixture of two parts fibrous loam broken up finely, one part peat, one leaf soil, and one cowdung, with some sifted charcoal and sand. This mixture will be found good enough for all successive pottings, unless the loam is light and fibrous, when an extra part can be added with advantage. They will now begin to grow freely, and should be looked over twice a day for watering and damping; do not let them get dry, it is better to err in the opposite direction, but a happy medium is best. Keep a sharp look out for aphids, as if this once gets established it will soon cripple them, getting under the leaves close to the soil, where it is almost impossible to get at them. The simplest way is to fumigate lightly once a week or ten days with an approved vaporiser which experience has taught the operator that it is safe and sure.

So soon as the roots have got sufficient hold of the soil to hold the ball together when removed from the pot, give another shift, using 4-inch pots, and potting firmer, but by no means hard. Shortly after this potting it will be getting unsafe to trust them to frames any longer, unless of course you have pipes in it, then they can be left with advantage, only using fire heat to keep the temperature falling below 35°. Unless the weather is very severe I should prefer covering with mats, &c., to using the pipes, as I know of no plants with a greater dislike to fire heat, as it causes a dryness in the atmosphere which is very distasteful to them. If they have to be removed to houses stand them on a bed of ashes or some other moisture-holding material. Ventilate freely on all favourable occasions, trying to avoid cold winds blowing directly on the plants, syringing frequently between the pots and overhead, say once a day, unless the weather is very dull. By about the middle of November they will be ready for transferring to 6-inch pots, potting them up to the first pair of leaves, as the roots which they emit from the stems are the main feeders. After this watering must be very carefully attended to, looking the plants over once a day, thoroughly soaking when they require it, not giving it to them in dribbles, always using rain water if possible. Keep a light shading always handy, as even at this time of the year we get bursts of sunshine which will soon affect them. About the middle of January they will be ready for their final shift. The size of pots this time must be according to the size of plants required, and the uses to which they are to be put; 8 and 9-inch are, I think, the most useful, but good stuff can be grown in smaller if they have been grown more restricted all through the time. Use the compost at this potting in as rough a state as can be conveniently worked into the pots, except the cowdung, which should be rubbed through a half-inch sieve. Remove the lower leaves, and to firm them over the old ball well.

Once they become established in this pot a tub of liquid manure, made by immersing in it a bag of fresh cowdung, should be always kept handy, and used in a weak, clear state every time they are watered. Give plenty of room, and as the flower spikes appear place a neat stake to each main one, leaving it at least 6 inches above them for further tying, as they get up. I omitted to state in the proper place that about the middle of December they should have their points taken out to induce a more bushy habit, as if allowed to go unpinched the plant is of a taller and more straggling appearance. The principal essentials, then, we will say, to the successful cultivation of this plant, are a cool, moist, shady atmosphere, a free yet somewhat firm rooting medium, and perfect cleanliness; with these, and attention to details, I am sure the result will amply repay for the time and labour spent on them.—T. F.

Laxtons' Strawberries.

WE mentioned in a brief note two weeks ago that a party of forty persons had visited Messrs. Laxton Bros' Strawberry grounds at Bedford on Monday, June 24th. The party gathered, on Messrs. Laxtons' invitation, at St. Pancras, from which they journeyed in a saloon-car to John Bunyan's birth-town, starting at 10.40, and arriving



STRAWBERRY MENTMORE.

about twenty minutes before mid-day. Here three waggonettes and a large brake conveyed us to the nurseries, situated just outside of Bedford. Until mid-day there were numerous ominous clouds, and a few showers by way of variety. But these soon melted all away, and the remainder of the day was ideal for the outing.

Then the acres of Strawberries were inspected. Each line, or lines, representing individual varieties had been clearly numbered, and for the occasion a programme was furnished to each person. We all scattered over the beds, and at once began a general tasting and considering. Recommend me to a group of Strawberry experts at work

for a lesson in conscientiousness — conscientious, at least, so far as tasting goes. The Laxton (that new Strawberry which in a year or two will be in every garden, and which cultivators will do well to secure at once from the pure, parent stock) was first on the list. And what did they all say of it? Answers were short, but decided and emphatic. "I'm satisfied," said Mr. James Smith of Mentmore; and he spoke as a man who had waited on an ideal, and now had got it. "The best thing you've ever sent out," was Mr. Bates' (of Twickenham) compliment to the Brothers Laxton; and out of a varied body of men, such as this midsummer's day party was, none spoke other than in praise of it. Other Strawberries met with criticism, and their weak points were exhibited, but The Laxton stood without a fault. The remark was naïvely made that if it had a fault it lay in this, that when one fruit had been tasted the partaker finds his propensities urged to try another, and another, and another. We described this foremost of all Strawberries in our issue of June 27th, where also a figure of it will be seen. The new Fillbasket next engaged exceedingly close attention. Its cropping qualities are quite phenomenal; it indeed has been properly named. The trusses here all bore from ten to sixteen fruits quite above average size. The parentage combines the outstanding perfections of Royal Sovereign and Latest of All. The crop on the 24th was just beginning to ripen. This is sure to become a first-rate market sort. It is not a good early forcing Strawberry, but for late use we believe none excel it. Then — and this is a matter purely of personal opinion — from among numerous others on the list Scarlet Queen, an old and well-tried sort, recommended itself as being one of the best-flavoured Strawberries yet in existence. Alas! however, though it has other qualities it is behind in size and appearance, and so fails to be appreciated. President and Keens' Seedling are two others whose splendid flavour seemed only to be heightened by the tasting of numerous contemporaries having no claims to merit. Growers cannot do better than still select and cultivate the foregoing; and while we are referring to meritorious known varieties with agreeable concentrated flavour, let us not forget the French Vicomtesse Hericart de Thury (syn. Garibaldi), which was introduced to England by the late Mr. Robert Thompson, of Chiswick. British Queen still maintains a good place.

Louis Gauthier adds another French variety of great merit to our select list. It is one of the white or pale-coloured Strawberries, a free bearer, with large firm berries, for midseason, and the flavour is splendid. It has a richness and variety that one vainly tastes for, in dozens of other kinds. We can heartily recommend this newcomer.

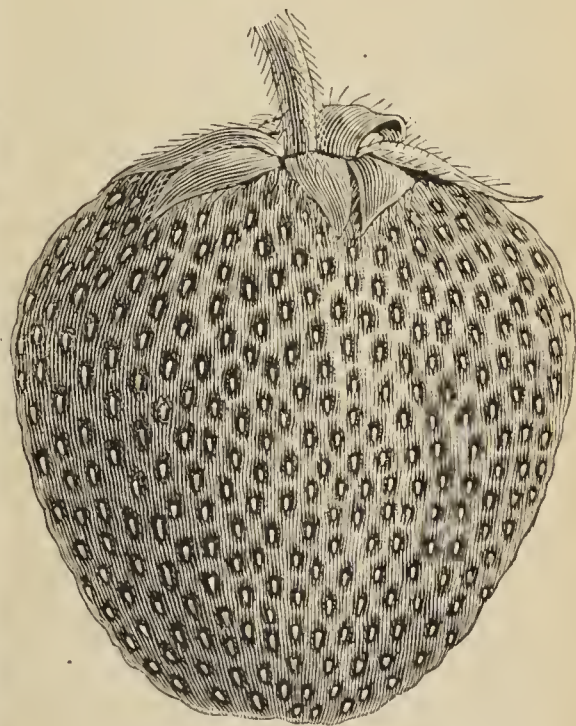
Mentmore is of recent introduction, and possesses a capital mellow flavour. As a cropper it is above the average. Our illustration shows its handsome appearance. The parentage here was Noble and British Queen. The fruits were ripe at the time of our visit. Latest of All (Noble × King of the Earlies) is an immense cropper, and truly a late sort. Frogmore Late Pine is, of course a favourite, and it, too, is a wonderful cropper.

While the foregoing are specially noteworthy, we would be doing an injustice were we to omit reference to McMahon, a very popular Strawberry in the North, and a good one; also to Stevens' Wonder, Sir Harry (one of the oldest), Sir J. Paxton, Royal Sovereign, Climax (from the same cross as The Laxton), Trafalgar (a very late, sure, and heavy cropper, see illustration), St. Joseph, St. Antoine de Padoue (Royal Sovereign × St. Joseph), Dr. Hogg, Waterloo, Sir Charles Napier, Leader, and Auguste Nicaise. Each of these are meritorious varieties, and should be included in every representative collection.

At the present time one is able to see a great number of seedling varieties on trial. These are carefully examined, and any that promise well are selected for further trial and improvement. It takes years to establish a stock of the highest perfection. From thousands of seedlings only a few come up to standard, and from these the stocks must be obtained. It goes without saying that only the very best and most perfect varieties are employed for crossing purposes. Royal Sovereign comes into the parentage of a very large percentage; as do also Sir Joseph Paxton, Noble, Latest of All, Waterloo, Frogmore Late Pine, St. Joseph, and others.

Mr. Harrison of Leicester was vice-chairman at luncheon, which the party enjoyed immediately after the inspection, and incidentally he mentioned that during forty years the Laxtons have raised between 60,000 and 100,000 seedling Strawberries, though not more than 1 in 10,000 are found sufficiently worthy to be named and sent out. In 1860 the firm sent out The Traveller, since when they have taken the greatest pains to continually improve upon existing varieties. The work demands a huge amount of patience, and there is anything but magnificent returns. Both Mr. Edward and Mr. William Laxton spoke in response to the toasts accorded them. Their aim had always been, and was still, to improve varieties, and though Strawberries are their speciality, yet they are working with all other fruits, and with vegetables, particularly Peas. The programme, so far, was concluded by the company being photographed in the open air. Ridgmont was then visited.

Jottings on Pines.—In order to accommodate suckers from the early section of summer fruiting plants, a fermenting bed in a low house or pit must be got ready, and its heat steady at 90° about 6 inches from the surface. Take the suckers from the parent plants carefully, trim the base smoothly, and place directly in 5 or 7-inch pots, according to the size of the suckers, and water once in order to set the soil about them. Good fibrous loam, torn up by hand, without any admixture, is the most suitable compost; embed it firmly in the pot, so that a sturdy growth may be insured in the plants. Keep the suckers rather close and shaded for a week or ten days, sprinkling through a fine rose once or twice a day, according to external influences. When growth takes place ventilation with less shade is desirable, but this must be proceeded with gradually until the growth is well decided and inured to the sun; then accord them ordinary treatment. When the suckers are well rooted they should be transferred to the larger fruiting pots before the roots become matted together. Queens and Black Jamaica should be given 10-inch pots, other sorts 11 or 12-inch, using fibrous loam, but more lumpy than for suckers, adding a sprinkling of dissolved bones; and to prevent worms entering the pots either use worm excluders or a handful of soot or wood ashes sprinkled over the rough material placed on the drainage.—PRACTICE.



STRAWBERRY TRAFALGAR.

Fruit Growing for Exhibition.

(Continued from page 479.)

Melons.

A LARGE, well proportioned, highly coloured, handsomely netted Melon always adds greatly to the merit and attractiveness of a collection of fruit. To secure such it is necessary to adopt special methods, because, although plants grown in the ordinary way are capable of carrying five or six fruits of a suitable size for the dessert table, it is seldom under such conditions that examples from 4 to 6 lbs. in weight can be obtained. The obvious course to pursue, therefore, is to reduce the number of fruits. In the early stages of growth remove at least every alternate lateral, so as to allow those retained plenty of room to develop. Fertilise four or five flowers, and then as the young fruits begin to swell select two or three of the strongest and best shaped ones, and remove the others. Under such conditions extra room can be allowed for the laterals retained. I therefore prefer to stop at two joints beyond the fruit, instead of following the usual practice of stopping at one. From this stage onward the great object of the cultivator should be to get the fruit to swell to as large a size as possible during each successive stage of development. With that object in view give the plants their final top-dressing as soon as the fruits are swelling freely. A suitable compost for the purpose is one formed of three parts rather stiff loam, one part horse droppings, with a little soot and steamed bonemeal added. Press the compost very firmly, and leave a slight elevation round the stem of each plant. Water through a rose at each watering until the soil is thoroughly settled.

Where the plants have been sturdily grown, the shoots kept thinly disposed, and the hot-water pipes made moderately warm each night and during dull days, I never hesitate to water close up to the stems, as the abundance of roots there suffer when the soil is kept dry. When, however, signs of canker are noticed, it is wise to keep the soil dry round the stem, and to rub into the affected parts powdered charcoal and lime. The chief points to observe in regard to watering are to allow the soil to become fairly dry through the whole mass, then water copiously; to give liquid manure once or twice a week, and top-dress with chemical manures every ten or fourteen days while the fruit is swelling. I like to syringe the plants heavily, and close the house, with abundance of moisture, at 2 P.M. during the hottest of days, and when the weather is unsettled an hour earlier, as I find this early closing brings quick results, and also helps to give size to the fruits. During bright mornings an additional syringing is given between 6 and 8 A.M., but in dull weather this is omitted. When well grown, Melon plants seldom require shading, but if any plant gets into a sluggish condition and shows signs of "flagging," it is better to shade for a few hours than to allow it to become unduly distressed through bright sunshine. A little attention to such matters will often save a plant which would succumb if not given the necessary "nursing." Throughout the growing season I like to allow a sub-lateral here and there to ramble a little, as the practice helps to maintain vigorous root action; and especially is it desirable to retain a little young growth near the point of each shoot carrying a fruit.

When the fruits begin to show colour it is, of course, necessary when syringing to keep the water from the foliage immediately surrounding them, but other parts of the plants may with advantage be syringed occasionally to keep the foliage healthy. The practice of withholding water at the roots during the ripening period is, I consider, neither necessary nor desirable. Cracking of the fruits is often brought about by withholding water too long, and then applying it, whereas if water is regularly applied, a little young growth left on the plants, and free ventilation given, there is not much danger of cracking. When, however, it is feared, cutting the stem half through just below the fruit is an effectual remedy. By giving due attention to such matters, grand highly coloured fruits without a crack or blemish may be obtained. An exhibitor may sometimes have a few fine fruits approaching maturity, and feel doubtful about their being ripe by a given time. The best thing to do under such circumstances is to give plenty of fire heat at night and leave a chink of air on. This will sometimes necessitate syringing during the evening, and always keeping the floors damp. I have sometimes maintained a night temperature of 80° for the purpose of getting fruits ripe by a given time, yet the plants have been none the worse for such hard driving. The vital point to observe and practise is to allow the hot-water pipes to cool early in the morning before bright sunshine comes.

Small or moderate sized Melons are usually better flavoured than large ones; those intended for exhibiting in classes provided for Melons only can therefore be cut from plants carrying good crops. In such classes the fruits are judged principally by their flavour when cut, and I have invariably found that Melons grown on plants not subjected to the drying process at ripening time to be of the best flavour. Such varieties as Hero of Lockinge and Countess need to

remain on the plants till fully ripe to obtain their full flavour. When a Melon is heavy in proportion to its size, appears to be quite ripe, and yet retains an agreeable scent, it is not often disappointing in flavour. Good varieties to grow for large fruits are Ringleader, Royal Jubilee, Blenheim Orange, and Sutton's A1; for exhibiting in classes where they are cut, Hero of Lockinge, Countess, Best of All, and Imperial Green; scarlet-fleshed kinds, Invincible, Empress, and Scarlet Premier.—H. D.

(To be continued.)

Legal Notes.

AN interesting and important case was tried before Mr. Justice Bruce, in the High Courts, London, during last week. Mr. John Rutherford, M.P. for Darwen Division of Lancashire, purchased a plant, alleged to be *Odontoglossum crispum* Triomphe de Rambouillet, from L'Horticole Coloniale of Belgium, for which he paid £80. This was in 1897, and was bought under a warranty that it would flower similar to a diagram which was shown to him at the time of the purchase. Had it done so, he estimated that it would have now been worth £120. It produced, however, in 1900, a flower—the first it had while in his possession—of "a muddy yellow, with brown spots," instead of the rare colour of "a pinkish-blush ground, with darker red marks, and a pure white lip," as warranted, and he estimated that at the most it would now fetch £6. In these circumstances he claimed from the defendant company £120 damages for breach of warranty.

The defence was that the plant produced and complained of was not the one sent to the plaintiff. Mr. Rutherford and his gardener had sworn that the plant was the same, and had never been removed from the Belgian pot in which it was sent. The defendant company said they did not allege that the plaintiff had acted in bad faith, but submitted that either he or his gardener had made a mistake, the original plant having either been mixed amongst the 1500 other Orchids possessed by Mr. Rutherford, or stolen from his Orchid house by some of the very numerous visitors who were permitted to view it. The reason that the defendant company offered to refund the money, if the plant proved untrue to the diagram after being seen by an expert, was that they had not then inspected it, and did not question its identity. The real plant was somewhere in the plaintiff's Orchid house, and would some day bloom a true flower. As to damages, if it was necessary to consider them, he submitted that the value of an Orchid was purely imaginary.

Cross-examined: The defendant company had 50,000 *Odontoglossums* in their eight houses, but this plant was in an apartment with only sixty or seventy other valuable Orchids. In a season they sent out 20,000 or 30,000 Orchids, of which only fifteen or twenty would be equal in value to Triomphe de Rambouillet. Mr. Henry Schuster, the agent of the defendant company, through whom the purchase was made, said that since this Orchid was sold others of finer variety had been cultivated, consequently its value had decreased, and he doubted whether it was now worth £80.

Mr. W. H. Cannon, solicitor, estimated the present value of the plant originally sold at £50. Multiplication of variety necessarily lessened the value.

It was again argued that it was within the bounds of possibility that the Orchid originally sold had been stolen, plaintiff permitting his constituents to visit his houses, and cited the fact that the plaintiff did not put on the labels the names of his Orchids as evidence that he feared theft. His lordship did not regard that as the reason, but rather that the plaintiff wished to keep the names and variety private.

Later, it was shown that whereas the diagram showed that it had six bulbs upon it, the superintendent admitted the one sent had only four bulbs and a growth. He further observed that it was hardly credible that large growers like the defendant company should send out 30,000 Orchids, some of them extremely valuable, in a season, and not keep a register of them, as the plaintiff had done.

His lordship, in delivering judgment, said the defendant company relied almost entirely upon the memory of Mr. Haumont as to what happened in 1897, and that it was clear that a plant with four bulbs and a growth did not answer to the description of one with six bulbs. There would be a verdict for the plaintiff for £114 with costs. Judgment was entered accordingly.—("Daily Telegraph.")

Cheap Fruit and Plenteous.—Last year there was a phenomenally large crop of fruit in the Vale of Evesham. This season there is every prospect of an almost equal yield of fruit. Blight is practically absent. Pershore Victorias are prolific, and Plums will be abundant. Very low prices are probable for all kinds of Plums. Gooseberries, of which there is a large crop, were selling at 3s. per pot of 63 lbs. There is a good supply of Cherries. Plums, too, are being seriously affected by the drought, and in many plantations the yield will be very small. Cherries, however, will be a record crop in spite of the dry weather. In Hampshire Strawberries are plentiful.



Autumn-sown Sweet Peas.

I HAVE had no experience as regards autumn raising of Sweet Peas in pots, cold frame space here being too limited, but I once had a quantity of self-sown ones come up during the autumn on a piece of ground which had been occupied by a row the previous summer. These were allowed to remain all winter without any protection, and in February were carefully lifted, with soil attached, and formed into a row in the open. The result was that we had a good row of Sweet Peas in bloom much earlier than previously. This experiment has led me to think that much unnecessary trouble is taken by sowing in pots and wintering in frames, when, in my opinion, they would do equally well sown in the open during autumn. Of course the cold frame system may be necessary with choice new varieties, or in cases where mice are troublesome, or the garden very exposed, but under all ordinary circumstances sowing in the open has quite as good results.—W. R. R.

Problem in Heating.

NOTWITHSTANDING the assurance of "H. D." that hot water will circulate freely through a trap, I do not anticipate the general adoption of Mr. Marsh's plan, as too many have already tried it and found it most unsatisfactory. It is, as "H. D." is candid enough to assert, contrary to all established theories, and, to go a step further, contrary to the true principles of the circulation of hot water. Why does "H. D." recommend this plan when he has such keen recollections of lonely midnight hours in trying to force the water past such points? His experience coincides exactly with my own, for it was only this past winter that I have had a similar dip removed, and re-arranged a hot water system that had been in use for a number of years, and was said to work all right by all except the person who had the stoking to do. It is perhaps needless for me to remind "H. D." that the air taps have nothing to do with the circulation, but only serve to allow for the escape of the accumulated air. Many a time I have seen the pipes crossing the floor of houses in such a way that you had to step over them in preference to dipping them under the path; not a very convenient plan, I admit, but in market places utility stands before appearance. I would now ask Mr. H. R. Richards why, if it is such a satisfactory plan, he does not give it a strong recommendation, instead of saying, as he does, "it is inadvisable?" I can assure Mr. Richards that I am not at all out of my depth, seeing that I speak from experience, and that I quite agree with him in saying it is a plan that is inadvisable. This is a question well worthy of discussion.—AQUA.

Flyless! Flealess! Frostless!

WHAT a striking text, and how enviable a circumstance. The Emerald Isle has furnished many instances where there has been much left to grumble at. "K., Dublin," writing thus in the Journal on June 20th, evidently is a man of very happy nature, and probably this lightness of mind carries him easily over the waves of common land troubles. Well would it be if there were many more such. The growls he says anent the drought are forgotten; they may be in his country, they are not in this England of ours, at least not in the garden bereft of a constant and ample water supply. I fear, however, we as gardeners complain even before we are hurt, but here the drought so keenly felt in May has been even more torturous in June. Up to the 19th inst. the rainfall had only been fractional, not enough, at any rate, to benefit the land. On that date a fall of 0.18 was registered, and the following day about a tenth of an inch more was added. This together, and the cooler state of the atmosphere, combined to set us on planting some summer and autumn crops that had been long anticipating the change, and so the characteristic grumble passes off into language of thankfulness even for small blessings.

Of frost, well we have had the most favoured year that comes within my memory. Not a morning since the newly planted Potatoes raised their heads above the surface has there been any record of frost sufficient to leave its trace on tender foliage or flower. May is no doubt a critical month; seldom does its exit pass without a growl, and frost perils are not uncommon in June.

In the flea world we cannot keep pace, but must lag seriously behind "K., Dublin," for among the Turnips they have had an unusually merry time; the leaves, even in a full grown state, have been punctured by them quite to their extremities. Some sowings were so badly "bitten" that they snored onrigh. We have much to be thankful for in the discovery of an exceedingly cheap and handy antidote, one the busy flea relishes not a little—road dust. A good coating with this sets them on a journey in search of fresh pastures. Fortunately the "silky, subtle Onion fly" with me is an unknown quantity.

Of aphides there has been the usual complement; but what is

remarkable about them is that they did not put in so early an appearance as usual; nor, considering the state of the weather, were they so numerous or persistent in their attack as one might expect. Peaches gave the most trouble, but, thanks to the virtues of quassia and quassine, their depredations were easily staged. Has "K., Dublin," no caterpillars, or are they so scarce that they neither call for mention or a place in his text? The foliage, I notice, of many trees bespeak the presence of myriads, and there must be a goodly assortment of variety, for so many kinds of trees have been victimised. We are getting into a period of the summer when those affecting tree life will have changed their state, but of the fearful anticipations of the Cabbage-eating ones we are not yet beyond the boundary. We can only hope that the good innings the spring caterpillars have had will give an exemption from further molestation in that particular line. Even then the "merrie month" nor the "smiling month" will not come and go in their turn without leaving us a grievance, for most unfortunately all are not alike in happy natures, and are not without "flies and fleas."—W. S.

Wall Copings.

MR. ELLISON has, in his last sentence (page 451), indirectly, yet accurately, answered the question he asked me, where he says, "Of course all trees must be syringed or sprayed occasionally." This sentence precisely describes the treatment the trees receive here under fixed copings, and with such treatment they do not, as Mr. Ellison infers, become the abode of red spider; and the earliest and best fruit is always found immediately under the glass. Such being the case, I fail to see what advantage is gained by the annual removal of the copings, especially as they, in conjunction with a net suspended in front, afford, when the fruit is ripe, not only a partial protection from rain but from birds also.—T. CHALLIS.

Ants.

If the lady friend of your correspondent "A. C.," who wrote in your last issue (page 13), will write to Mr. Thos. Pickin, South Parade, Manchester, I think he will be able to send her something that will protect her Rose trees from the ravages of the ants she complains of, and at the same time do no harm to the Roses. He calls it motholine, on account of its death-dealing properties to moths and most other insects. My experiences of its beneficial uses are as follows:—The first few rows of Peas my gardener sowed came up most irregularly, in fact were a failure. On examining them, I found they were infested by myriads of small millipedes, that clustered round each Pea, eating off all rootlets, and destroying the Pea itself. I took a large number of these, and sprinkled a little motholine on them, when the millipedes at once collapsed, and were dead in a few minutes. I then made a strong solution, by pouring boiling water over the motholine, and watered several delicate Ferns, to see whether it had any adverse effect on them; but they were not damaged at all. This being so, my next Peas, when sown, had a sprinkling of the motholine sown with them, the result being very satisfactory, not a single Pea being attacked. My early Cabbages, Cauliflowers, &c., were similarly troubled, and drooped, and died. I treated the newly planted ones in the same way, putting a pinch of the material to the roots of each when planted; these, too, never looked behind them. I may say I have no interest in motholine, pecuniarily or otherwise, but I think your correspondent will find it effective.—T. G. S. GARNETT.

A Feast of Roses.

SURELY you may apply this to the grand exhibition which was held last week in the Temple Gardens, for a real and true feast it was. It was not one where Roses are tumbled together in all sorts of ways, and where the one desire seems to be to have as large a number as possible. In such a "muddle" there can be no real beauty, and, to the lover of the Rose, no enjoyment, for it must be remembered that lovers of the flower have become more and more critical of late years, and Roses have more and more improved. The entries which were made indicate that exhibitors all over the country feel the importance of this great show. From all parts came the cultivators and lovers of the Rose, the North of Ireland sending its contingent from Newtownards and Belfast, some from the South of Scotland, and some from North Wales. England, however, was the predominant partner, and from many of its counties members sent their contributions, chiefly from the more southern parts of the kingdom; from Essex, which may really claim to be the metropolis of Rose growing, and from Hertfordshire, where we may say in past days the Rose was especially cradled, for it is impossible to say how much we owe to dear old Thomas Rivers for his introduction of the Manetti stock, and so enabled growers to multiply their plants and thereby reduce their price. And then in the Tea division Oxford is again to the front, and Mr. Geo. Prince sends those flowers which captivate all Rose lovers, and show how marvellously the seedling Brier has encouraged the growth of this beautiful section. Of course, we cannot tell what the character of the blooms will be, but from the exhibitions which have already taken place, we may augur that the Roses exhibited will be true to character and of good form and substance.—D., Deal.



The Early Rose.

AMONG the many things for which the nineteenth century was remarkable must be included the wonderful variety of Roses which were produced almost from its very beginning to its close. It is equally remarkable that the century preceding handed on to its successor not more than eighty species and varieties, the most exhaustive list appearing in Abercrombie's "Gardeners' Assistant" (1792), where seventy-seven kinds are enumerated. Miller in 1768 names forty only, and in the interesting catalogue of Gray of Fulham not more than thirty-three sorts are offered for sale. This list is dated 1740, and contains only three more sorts than Parkinson described over a hundred years earlier.

According to Gerarde, the first improvement in garden Roses is due to the Dutch, but there is every reason to believe that gardens were furnished with delightfully scented Damask and Provence Roses long before this period. If it were not for the poets we could only conclude that the folks long ago were so practical, that the Rose appealed to them in a less degree for its beauty and its fragrance than for its value as a medicament, or as an indispensable ingredient in the form of rosewater in cookery, and it is somewhat strange to discover, as we do in a little book published early in the seventeenth century, that red Roses were cultivated in fields near London to supply the requirements of that, even then, great city. It is not ungrateful to one's feeling of sentiment to know that not a few of the early Roses are still in cultivation, in many cases no doubt permitted to remain because they are already there, but in others because they are cherished. The common White and Double White, for instance, are to be found in company with the Maiden's Blush, which Gray describes as Parkinson's "incarnata," in almost every hamlet and village, as they must have been at any time for centuries past. And what a queer example of modernity must that garden be wherein no Damask Rose unfolds its roseate petals, and paints the sun with her chaste blushes. Unfortunately not all the old varieties of this Rose can now be identified; there is, for instance, "The Chrystale" of Parkinson and "Mrs. Heart's" Rose, mentioned first by Rea, that seem to have been lost long ago. We have still, however, a few of the old Gallica Roses, as, for example, The Velvet, of which I grow four reputed varieties. Rosa Mundi, one of Rea's Roses, is also said to be still in cultivation, though, personally, all I have had through my hands of this Rose have been York and Lancaster. Either De Meaux or Spong, or something very like these neat little sorts, was also grown very early. The Provence Roses, which were mixed to some extent with Gallicas, and also with the Damasks, have been cultivated for a very long period.

Musk Roses were also great favourites in old gardens, though they do not appear to have been introduced earlier than the middle of the sixteenth century. Bacon commends them for their sweet smell, which, as in the case of the Eglantine, was emitted in the evening. They were introduced from Italy, and were known also as Monthly Roses, because on the continent they were to some extent perpetual in their habit of flowering. This name was usurped about seventy years ago by the China Rose. The Musk Rose possesses not a little interest, too, as being one of the flowers which Milton names in "Lycidas" among "vernal flowers:"—"The glowing Violet, the Musk Rose, and the well attired Woodbine, with Cowslips wan, that hang the pensive head," &c., which proves the poet to have been no florist, and, indeed, to have possessed only the most superficial knowledge of flowers.

The single yellow Rose, *Rosa lutea*, is still found in our gardens, where it is an older denizen than the double yellow (*Rosa sulphurea*), commonly styled the yellow Provence, from the texture of its petals being exactly like the white Provence Rose. It has always been a difficult species to cultivate, so as to induce it to flower in that perfect way that every gardener desires. It was "first procured to be brought into England by Master Nicholas Lete, a worthy merchant of London, and a great lover of flowers, from Constantinople, which (as we heare) was first brought thither from Syria; but perished quickly both with him, and with all other to whom he imparted it; yet afterwards it was sent to Master John Franqueville, a merchant also of London, from which is sprung the greatest store that is now flourishing in this kingdom." It was commonly budded on the Frankfort Rose, and sometimes double budded. If it were not for the complaints reiterated through the centuries one would be inclined to doubt the

insurmountable difficulties attending its cultivation. Personally I have had very good success with it, and even with a less degree of success the beauty of its delicate, perfectly formed blossoms would amply repay any little thought required to do it well. In a MS. list of Roses cultivated in a Yorkshire garden very many years ago, a "minor" variety of the above appears, and there is data to show that two varieties were in cultivation, the one less easy to flower than the other. *Rosa lutea punicea*, "the red or scarlet Austrian," first appears in Rea's "Flora," and no doubt it was thought much more of two centuries ago than it is at the present day.

The Moss Rose is first mentioned by Boerhaave in 1717; Gray catalogued it in 1740, though it is said to have been introduced from Italy in 1735 among some Orange trees. The White Moss appeared as a sport in 1788. The discovery of the White Provence reads like a romance. The nurseryman, Grimwood, on one of his journeys in Norfolk in 1775, found a Rose blooming in a wayside garden, which his experience showed to be unique as it was rare. He begged a flower from its owner, giving her in return, and no doubt to her gratified surprise, a golden guinea. The flower stalk had three buds attached, which were sent home and propagated. Next year he purchased the plant for five guineas, selling the stock three years thereafter for £1260, of which his propagator for his share received £300, and £60 with a silver jug was despatched as a *douceur* to the original owner.

The Scotch Roses, which enjoyed a great though short-lived popularity sixty to eighty years ago, were cultivated before the middle of the preceding century, though only some six varieties had been obtained up to its close. The Sweet Brier as a garden plant has also retrograded. It seems to have always been present in mediæval gardens, possibly in its simple single-flowered form, but as early as Gerarde's time there was a variety cultivated with two rows of petals to the bloom. The other varieties mentioned by various writers comprise double, semi-double, double blush, double scarlet, and a variety with striped leaves. Those who delight in sweet smells should certainly find a place for Sweet Brier. Like the Rocket and the Stock it disperses its fragrance in the evening, but, unlike them, its fragrance is not confined to its flowers, but every little leaflet gives its help to perfume the balmy air. In its proper connection the fact of some three kinds of Damask Roses having been, along with the Musk Rose, designated Monthly Roses, has been omitted. Our Monthly Rose, *Rosa indica*, was cultivated as a tender plant for some forty years after its introduction; the fact of its having succeeded out of doors having been chronicled in the pages of the horticultural press long after last century had started on its progress. For a very long time it was largely cultivated by those modest gardeners whose sole glass was measured by the dimensions of their windows, and it would appear that the first appreciation of its being a hardy shrub, and not a stove exotic, resulted from one of these window plants having been turned out by a cottager into his little flower plot.—R. P. BROTHERSTON.

Show Roses.

DURING the next fortnight Roses will form one of the leading attractions of flower shows, and, if one cares to take the trouble to observe, it will be seen that young undeveloped flowers are the more favoured by judges in making the awards. Faulty flowers in colour and shape are soon detected by them; these do not gain prizes, however well they may have been grown. Most growers tie the blooms—that is to say, each flower which looks like opening perfect in shape has the centre fastened, not too tightly, with worsted. It is important that the centre only shall be tied, because the outer petals require room to extend. This tying of the blooms may be done in the case of Tea Roses a couple of days before a show is to take place, and with the quicker opening hybrids and dark Roses a day before. Of course good specimens should be chosen, with centres pointed in shape. The tying will extend such points in a remarkable degree. The practice is to keep the tying material on the blooms until they are staged, allowing oneself time to remove them before cleared from the tent for the judges.

Blooms in a half open stage the night before a show are those which are selected. This is the general rule. There are some varieties, however, so thin of petals that they may be only opening buds in early morning, and yet be fully out by mid-day. The crimson Captain Hayward is an instance of this. To accurately judge all Roses requires experience, only obtained by many years of observation, as most varieties have peculiarities. Those blooms grown on stiff soils will, of course, last longer than those cultivated on light soils, and the weather too at the time of cutting the blooms must be considered. But we are sure the advice is sound when we recommend choosing blossoms in a young state of development in competition; nice form, freshness, and colour being all-important points.—H.

The Best Roses at Richmond.

THE early Rose competitions at Richmond on June 26th brought together an important display. Generally the blooms were not of superlative excellence, being wanting in both size and substance, owing, no doubt, to the absence of rain. We shall therefore expect to see finer examples of this popular flower at later meetings. In regard to individual blossoms, the finest were to be found in the stands of the nurserymen. We noticed few Hybrid Perpetuals that struck us as being anything out of the ordinary way. Mrs. John Laing (a flower of which obtained the premier award) was everywhere good. One or two notable specimens of Horace Vernet were seen. This striking Rose does best on maiden plants, hence is more general in the trade exhibits. So, too, is Victor Hugo, a handsome vivid crimson flower. Comtesse de Ludre, bright cherry crimson, seems to be a Rose not taken up by amateurs. It is of faultless form and colour, also of good size. One looked in vain for Marie Baumann or Alfred

A Rose well represented was Kaiserin Augusta Victoria, which in a half-open stage is most attractive. A bright, high coloured, tea-scented Rose is François Dubreuil. This brightens a box capitally, and, if not of extra large size, is of pretty form. That charming family of Teas which have sprung from Catherine Mermet—Bridesmaid, Muriel Grahame, and The Bride—were sparingly represented. These will probably be more notable in later shows.

Garden Roses now have such an important part of an exhibition devoted to them that great attention is given to the class. Of course all Roses are garden Roses, but it is only the vigorous-growing and free-blooming kinds which become popular and can be cut in big bunches for decoration. One sort at Richmond that was new to us and of special attractiveness was Souvenir de Catherine Guillot. It is described in a well-known catalogue "coppery carmine centre shaded with orange." Certainly the flowers have tints of remarkable combination. Ma Capucine, bronzy yellow, is a most taking kind; Bardou Job, an almost single crimson, is a very showy Rose in



MR. PRINCE'S ROSES IN VASES.

See Class 9, N.R.S Report.

Colomb in the form they are sometimes seen, and A. K. Williams was not well represented. Probably it is a little early for Hybrid Perpetuals.

The Tea Roses were most beautiful. Comtesse de Nadaillac, exhibited by Mr. Geo. Prince of Oxford, had those charming tints of apricot that make the sort so attractive. The size, too, this grower gets this Rose is remarkable. Whilst thinking of Nadaillac, the same exhibitor had a Rose not unlike it in his stand, named E. V. Hermans. It is comparatively new, and worth noting on account of a vigorous growth, which the favourite Rose above mentioned has not. White Maman Cochet, everywhere fine, is a Rose of rare merit, although the tints of pink in the flower prevent its name from being strictly truthful. Maman Cochet (itself) was seen in excellent form, and the premier flower in the amateurs' division was one of this. With us it too often comes quartered in shape, otherwise it is quite one of the best Tea Roses grown. La France was represented by a bloom that won premier honours, thus showing that the old favourites, when in good form, are by no means inferior to newer kinds. The blooms of amateur growers appeared less fresh than those of the trade growers, and bore traces of heavy shading, tying, and such manipulating as is necessary to husband comparatively small resources.

bunches. The lovely Sweet Brier Lady Penzance, with its tints of coppery yellow, was not the least striking among the garden Roses. Janet's Pride, again a white, crimson tipped, single, is especially showy.

Among new Roses noted was one that obtained the highest award possible—namely, the gold medal of the National Rose Society. In this instance a really fine variety gained this distinction; fine because it is of crimson colour and having the necessary virtues of a good Rose. Ben Cant is the name of this new flower, and worthy it is to bear the name of that rare departed Rose-grower. Vivid in colour and excellent in shape and size, it has substance in its thick, leathery petals and growth of a sturdy nature, judging from the plant exhibited. Truly an exhibition Rose, and one likely to prove a most valuable acquisition. Not quite new (having already won the gold medal), is Mildred Grant—a most magnificent flower. The dozen blooms put up by its raisers, A. Dickson & Sons, Newtownards, was probably the finest stand seen at the Richmond Show. To describe it is not an easy matter, and to do so in a few words, so that those who have not seen the flower can form some idea of it, we would term it a light-coloured Mrs. W. J. Grant. It is white, flushed with lilac, and in superlative form resembles the variety named. Mrs. Edward Mawley is a superb new

Rose. The shape and size are of the best, and its colour is a very attractive shade of salmon-pink. This is classed a Tea-scented kind, but there are traces in its growth of the Hybrid Tea section. Be this as it may, it is a Rose that should be increased in number of plants if exhibiting be the object of the grower. Not the least valuable merit in this Rose is its fine lasting qualities when cut.—S. W.

New Roses at the Temple.

ALTHOUGH there were no Roses noted at the National Society's show that we had not seen before—at least, no Rose of merit, several introductions of recent date were so prominent as to be most noticeable. The fine productions of Messrs. Dickson of Newtownards appear to overshadow those of other raisers in a remarkable manner. Mrs. W. J. Grant, Mildred Grant, Bessie Brown, Mrs. Edward Mawley, here are four Roses of extra large size, and each with its petals so beautifully folded up to a long perfect point as to suggest quite a distinct strain. We have noted every new Rose distributed by the above named raiser, and have sometimes thought that no one but themselves can produce flowers of them in anything like the form which creates so great a sensation among Rose growers when each in its turn has been exhibited; and still have in mind, such Roses as Margaret Dickson, Marchioness of Downshire, the earlier productions of their seed beds. But with Mrs. W. J. Grant and Bessie Brown, for example, it appears that all can, if they like to try, grow blossoms equal in beauty to those which come from the ground that gave them birth, so to speak.

Lady Moyra Beauclerc is a Rose of charming shape and large size, rather a deep shade of rose in colour, with silvery back to the petals. Alice Lindsell, a salmon pink shade, rich and striking; it has the fine-pointed form so desirable in exhibition Roses. Florence Pemberton reminds one of the Rose Bessie Brown in the way of colour, and is likely to be seen in equally fine form at no distant date. Liberty is a Rose that should be noted by market growers; its colour is rich vivid crimson red, not a large bloom, but faultless in shape. We were particular to observe its lasting qualities when cut, inasmuch as the flower exhibited stood the heat of the whole day, and was fresh in the evening. Papa Lambert is of a colour, deep rose, in which fine examples of Roses are not scarce, but it is a well-built bloom with capital substance. Mrs. Cocker is a light pink Rose we thought highly of last year when first seen; this, judging from the few specimens seen, will be useful from an exhibitor's point of view. Ulster is a full, deep, well-formed bloom of a salmon-pink shade; it seems to us a trifle wanting in those large outer petals which give to the Rose such character. Killarney is a Rose that has these big petals in a wonderful degree, but there is not enough of them to make the flower double, hence it is one that will be difficult to show.

Ben Cant is an excellent Rose, so much needed on account of colour. It is vivid crimson, the shade of Général Jacqueminot, and has petals of fine thick texture. Exhibitors will do well to remember this Rose, and obtain it when it can be had. The free-flowering Rose Queen Alexandra will be grown as a decorative garden Rose. It is showy, yet more than once we heard the remark that it is like the well-known Crimson Rambler when it is of bad colour. This, too, is our own impression. Sylph is hardly new, but it is a Tea-scented variety not very generally grown. This looks pretty in a box, being of capital size and shape. The colour, cream tinted lilac, is distinct. Boadicea is a new Tea-scented Rose, lately exhibited in London, that is likely to be esteemed. The colouring is like that of Madame de Watteville, but the form of the bloom is deeper and more globular. Grown less free in the matter of side buds than those flowers on view, it should develop blooms of good proportion, whilst its shades of colour thoroughly recommend it.—H. SHOESMITH.

Medal Roses.

VERY interesting awards made at the important Rose Show at the Temple Gardens recently were those given to the "Medal" blooms. Half a dozen flowers are so honoured, three in the nurserymen's section and three in the amateur classes. Usually, and certainly in this case, grand specimens of the Rose gained the coveted distinction. To our taste, absolutely the finest Rose in the show was the Tea Souvenir d'Elise Vardon, grown by Mr. John Mattock, Oxford. Not only was it sweetly pretty in shade of colour, but the width and depth of the bloom were remarkable. This was the nurserymen's medal Tea Rose. Mr. Orpen, Colchester, won a similar prize in the amateur section with a choice bloom of White Maman Cochet. One or two of its petals bore traces of bad weather, and were slightly damaged, otherwise it was a charming specimen. This new Rose was splendidly exhibited by the amateur named throughout his stands. It is creamy white, with tints of peach colour on the outer petals, and most perfectly formed.

Probably later in the day than the time awards were made White

Maman Cochet would have been beaten by a magnificent flower of the pink type, Maman Cochet, found in a third prize box of Mrs. Innes, Hitchin. This flower was a most perfect specimen, and appeared to develop as the day wore on. In the afternoon even the fine Souvenir d'Elise Vardon mentioned above was less attractive. We would like to see these superlatively fine examples of Roses together, and photographed life size, so that lovers of Roses might obtain a lasting look at the best productions of each year. The Hybrid Tea that gained honours in the trade division was a flower of Mildred Grant, a splendid bloom of a grand Rose raised and exhibited by Alex. Dickson and Sons of Newtownards. The petals of this superb Rose have the texture of leather; its colour is ivory white, with just a tinge of lilac. In a similar prize for amateurs, the bloom that won was one of Bessie Brown, a Rose raised by the firm named above, and exhibited by Mr. Moules, Hitchin. This Rose is creamy white in shade of colour, and magnificent in shape and proportions. The flower which obtained the medal was not the best of its kind in the whole show to our thinking, it being generally very grandly shown in the nurserymen's division.

The premier Hybrid Perpetual was a bloom of Mrs. John Laing, exhibited by Messrs. Croll, Aberdeen. This was excellent in size, shape, and colour. The characters of this Rose are so well known that it is not surprising to find an individual bloom beating all others. A like award among amateur growers was obtained by Mr. Hobbs, Worcester, with a lovely specimen of Her Majesty. This Rose has its seasons, and, judging by the number of very fine flowers of it at the Temple, the present season has suited it well. Few Roses surpass this kind when in a half-opened state. The medal Roses, then, of this year at the chief exhibition were two of recent origin raised in these isles; two (Mrs. John Laing and Her Majesty) originated with the late Mr. Bennett at Shepperton. White Maman Cochet is a sport from a Rose of somewhat recent date from France, and Souvenir d'Elise Vardon is the only variety which can be termed an old Rose. This was distributed in 1854.

To those who believe the Rose to be so perfect that it is impossible of improvement the medal Roses point opposite. There is no such thing as finality with florists. In what direction improvements will take only the future can tell, but one could wish for change in the way of better dark-coloured Roses. These lag behind, and seem more scarce at each yearly exhibition.—H. SHOESMITH.

Rose Golden Queen.

THE subject of our illustration (see page 35) is one of Messrs. Wm. Paul & Son's new bedding Roses, one which must become as fully appreciated as Fabvier or any other of the popular bedding varieties. An exhibit of this novelty was seen at the last Drill Hall meeting, where its finely formed, golden-yellow blooms were very specially admired. The variety seems to have a good deal of Madame Falcot in it, but of this we are not assured. The habit is good, and, as we have said, it ought to become a very popular Rose.

Workmen's Compensation Act, 1900.—A pamphlet, entitled a "Handy Guide to the Act," and having explanatory notes for the use of farmers and others, by Mr. John Griffiths, solicitor, has been issued at 15, North John Street, Liverpool, price 6d. Those wishing to master the details of the Act should secure this publication.

Fruit Crops and Their Enemies.—Two recent meetings of the Astwood Amateur Gardeners' Society have been devoted to the consideration of injurious insects to fruit crops. Prominent among them is the injury to the Pear crops from the grubs of the Pear midge. In some cases the entire crops lie rotten on the ground where trees were white over with bloom in the spring. Mr. Hiam had noticed these pests for fifty years, but never to such an extent as this season. The practised eye may detect the infested Pears directly they go out of blossom, and in cases he counted over sixty grubs in a single Pear. On bush trees, pyramids, espaliers, cordon, or wall trees the infested Pears may be detected, picked off, and burnt, but on large trees or perry fruit they were difficult to deal with except by either dressing underneath the trees or burning turf as far out as the branches extend. Specimens of American blight or woolly aphid on Apple trees were shown under the microscope. These may at this season of the year be readily detected by the patches of white on the trunks and branches of Apple and Pear trees, and should be killed, as long as any white spots are observable, with a solution of paraffin and soft soap well worked into the affected places with a brush. Other pests shown and the damaged fruit or foliage included red spider, various aphides, bud mites, scale, caterpillars, teggs, &c. Various remedies for destruction were given. Samples of Wheat badly affected with red rust were produced, the field from whence the sample was obtained looking sickly and yellow, while an adjoining field of Oats, dressed with nitrate of soda, was of a particularly dark green. Votes of thanks were accorded Mr. Hiam for the various specimens and the interest bestowed upon the subject.

NOTES & NOTICES

"Kew Bulletin."—A Kew Bulletin of miscellaneous information has been issued by the director of the Royal Gardens. The price is 4d.

Royal Horticultural Society.—At a general meeting of the Royal Horticultural Society, held on Tuesday, July 2nd, thirty new Fellows were elected (making 614 since the beginning of the present year), amongst them being Lady Margaret Boscawen, Lady Bickersteth, Lady Tennant, Lady Whitehead, and Surgeon-Colonel Arthur Sanderson, A.M.C.

Lily Show and Conference.—The Royal Horticultural Society will hold an exhibition of Lilies in their gardens at Chiswick on Tuesday and Wednesday, July 16th and 17th. The committees will meet at 11 A.M., and plants, &c., for certificate will be placed before them as at the usual meetings in the Drill Hall. The gates will be opened at 12 noon on July 16th, closing at 7, and at 11 A.M. on Wednesday, closing at 6 P.M. Fellows admitted free on showing their tickets. A conference on Lilies will be held at 2 P.M.

Lilium giganteum.—In the royal park of Greenwich may at present be seen an unusually large and well-developed specimen of this king of Lilies. It is fully 9 feet high, the stem 11 inches in girth, and is bearing twenty-one flowers. Planted in a deep peaty bed amongst Rhododendrons, Azaleas, and Kalmias, and in a low-lying and well sheltered situation, this fine Lily has attained to a size that has been rarely, if ever, equalled in the British Isles.—A. D. W.

Altrincham Gardeners'.—The members and friends of the above paid their annual visit to the nurseries of Messrs. Clibran's on Wednesday, July 3rd. The party, numbering upwards of one hundred, were driven in brakes from Altrincham to the tree, shrub, Conifer, and fruit tree grounds of Messrs. Clibran's at Hale, where the extensive stocks were much admired. Returning to Altrincham, the alpine and herbaceous collections, stove, greenhouse, and other subjects in the Oldfield nurseries, were inspected, and afforded great pleasure to the visitors. The tour over, the remainder of the evening was pleasantly spent in an informal smoking concert, held in one of the large packing houses attached to the nurseries, light refreshments being provided by Messrs. Clibran's. A few short speeches, and the passing of a vote of thanks to the firm, brought a very pleasant evening to a close.

"All About Sweet Peas."—This is the title of report, printed in neat little booklet form, of the Sweet Pea bi-centenary celebration of a year ago. It is published for the Bi-centenary Committee by Mr. Richard Dean, V.M.H., Ranelagh Road, Ealing, who so successfully fulfilled the duties of hon. secretary all through the proceedings. We also publish it from this office. The cost of this very useful and embracing publication is only 1s., so that every gardener may without difficulty obtain it. All the papers prepared for the celebration are incorporated in full, treating respectively on "The Early History," "The Evolution," "Classification," with culture and selections of the Sweet Pea. The report includes four illustrations, one representing the veteran Mr. Henry Eckford, as "Sweet Pea King." We need say nothing further; we know it will pass into the hands of all true flower lovers.

United Horticultural Benefit and Provident Society.—The monthly committee meeting of this society was held on Monday evening last at the Caledonian Hotel, Adelphi Terrace, Strand; Mr. C. H. Curtis in the chair. The minutes of the previous meeting were read and confirmed. Seven new members were elected. Nine members are on the sick fund at the present time. Mr. John Faurey (No. 239) was granted £1 10s. from the Convalescent Fund. A letter of thanks from Mr. Geo. Clinging was read, for assistance from the Convalescent Fund. A cheque for £6 5s. 11d., being the amount standing to the credit of the late Richard Smart (lapsed member) was granted to his widow. Cheques were granted to Messrs. G. Moreland and J. M. Barry, being quarterly allowances from the Benevolent Fund, also cheques for Messrs. Pollett's account, and for the secretary's salary. The treasurer reported that he had £187 3s. 6d. in hand. The proof for new rule books was then gone through and passed for the printers.

Gardening Appointment.—Mr. E. D. Smith has gone from Barrow Hedges, Carshalton, to B. B. Hagen, Esq., The Gardens, Sway House, Lymington, Hants.

Royal Warrants.—The King has been graciously pleased to grant warrants of appointment to Messrs. Sutton & Sons, of Reading, and to Messrs. Carter & Co., of Holborn, as seedsmen to His Majesty, and warrants to Mr. Charles Turner, of Slough, and Messrs. William Paul & Sons, of Waltham Cross, as nurserymen to His Majesty.

Crystal Palace Fruit Show.—Schedules of the eighth annual fruit show, to be held at the Crystal Palace, Sydenham, on October 10th, 11th, and 12th, are now ready, and may be obtained on application to the Secretary, 117, Victoria Street, Westminster, S.W. Applicants should enclose a stamp.

Trees in the Strand.—In consequence of the additional space added to the footpath outside the Law Courts in the Strand, London, by the recent curtailment of the churchyard of St. Clement Danes church, a row of trees, says the "Daily Graphic," is to be planted near the edge of the pavement along the Strand frontage of the Courts.

Dundee Horticulturists.—A meeting of Dundee and District Horticultural Association was held on July 2nd in the Technical Institute, Mr. David Croll, president, in the chair. The principal business was the hearing of a paper read by Mr. Little, Ballendrick Gardens, Bridge of Earn, on "The Culture of Peaches under Glass."

Irish Gardeners' Society.—The usual monthly meeting of the above society was held on Thursday last; there was a large percentage of members. Mr. J. O'Kelly occupied the chair. After the usual business was transacted the arrangements for the Rose display was proceeded with, and the selection of the judges made. After the usual votes were recorded the president announced that in July the competition would be limited to Carnations. The proceedings then terminated.—A. O'N.

Scottish Horticultural Association.—The monthly meeting was held on the 2nd inst., when a large number of members were present. Mr. Kidd, the gardener to Lord Elphinstone, Carberry Tower, read a most interesting and instructive paper on the "Cultivation of Malmaison Carnations." Mr. Kidd is a most successful cultivator of this section, and his very practical remarks were listened to with much appreciation. A very spirited and invigorating discussion followed. Exhibits were numerous and most attractive. Mr. Kidd, Carberry, in illustration of his paper, contributed a most lovely vase of pink Princess of Wales Malmaisons; the blooms were large and of beautiful colour. He also exhibited a beautiful collection of Sweet Peas of the most approved sorts, Lady Mary Currie being specially attractive. Mr. Todd, Stoneybank, Musselburgh, exhibited a splendid vase of Roses, most beautifully arranged, some very handsome blooms of Caroline Testout, Kaiserin Augusta Victoria, Marquise Litta, Ulrich Brunner, Général Jacqueminot, La France de '89, Bardou Job, and others. A collection of cut herbaceous plants, in many beautiful varieties, were shown by Mr. Grieve, who also showed beautiful Pansies, &c. Intimation was made of the summer meeting, to be held on the 12th inst., when exhibits of Roses, Strawberries, Sweet Peas, &c., are invited.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
June. and July.										
Sunday .. 30	E.S.E.	deg. 60.2	deg. 57.0	deg. 70.2	deg. 55.4	Ins. 0.90	deg. 65.2	deg. 61.8	deg. 56.8	deg. 52.6
Monday.. 1	S.E.	61.4	59.8	70.2	58.5	—	63.4	61.3	57.0	57.5
Tuesday 2	S.E.	68.7	60.9	69.3	55.8	0.18	63.2	61.0	57.2	49.8
Wed'sday 3	E.S.E.	62.7	60.0	73.5	56.5	—	62.3	60.7	57.2	52.9
Thursday 4	N.E.	59.9	57.0	78.9	56.5	—	63.8	60.9	57.2	50.5
Friday .. 5	N.W.	71.8	65.0	81.5	58.2	—	66.5	61.6	57.3	57.0
Saturday 6	N.N.W.	68.8	63.0	71.5	58.0	0.02	67.8	62.5	57.5	52.3
MEANS ..		64.8	60.4	73.6	57.0	Total 1.10	64.6	61.4	57.2	53.2

A week of rather dull pleasant weather. Rain fell on three days.

Societies.

National Rose.—Inner Temple Gardens, July 4th.

THIS show was an unqualified success. Below we give a full report of the classes, while under "Gadding and Gathering" will be found notes of a more general nature.

Nurserymen's General Section.

Champion Trophy Class.—In this class the nurseryman winning the first prize holds the nurseryman's champion challenge trophy, value 60 guineas, presented by amateurs, and also receives a memorial gold medal. There is a money prize of £6. The class demands seventy-two blooms, distinct, and naturally forms one of the finest features of this magnificent Rose show. There were five splendid entries, stretching over 20 lineal yards of tabling, and representing 360 blooms. After nearly an hour's most careful deliberation the judges awarded the prizes as follows:—First, Messrs. Harkness & Son, Hitchin and Bedale; second, Messrs. B. R. Cant & Sons, Colchester; third, Messrs. F. Cant & Co., Colchester. Messrs. Harkness had indeed a splendid collection, most of them strong blooms, and, as a general run, smooth and even. They had Mrs. John Laing, Général Jacqueminot, Souvenir de S. A. Prince, Dupuy Jamain, White Lady, Sir Rowland Hill, Alfred Colomb, Caroline Kuster, Chas. Lefebvre, Ethel Brownlow, Marie Baumann, Ernest Metz, Louis Van Houtte, White Maman Cochet, Horace Vernet, Innocente Pirola, A. K. Williams, Pride of Waltham, Mrs. Cocker, Heinrich Schultheis, Merveille de Lyon, Suzanne Marie Rodocanachi, Mrs. Edward Mawley, Captain Hayward, Mrs. F. W. Sanford, Tom Wood, Madame Wagram, Comtesse de Turenne, Dr. Andry, Madame Gabriel Luizet, Duchesse de Morny, Marchioness of Londonderry, François Michelin, Kaiserin Augusta Victoria, Comte de Raimbaud, Marchioness of Downshire, Ulrich Brunner, E. Y. Teas, Maréchal Niel, Exposition de Brie, Maman Cochet, Marquis of Dufferin, Madame Hoste, Gladys Harkness, Madame Delville, The Bride, Madame Cusin, Medea, Victor Hugo, Madame E. Verdier, Etienne Levet, Lady Marie Fitzwilliam, B. Joubert, Madame Josephine Bonnaire, Duke of Teck, Mrs. W. J. Grant, Duchess of Edinburgh, Muriel Grahame, Prince Arthur, Souvenir d'Elise Vardon, J. S. Mill, Ulster, Duchess of Bedford, Madame Cadeau-Ramey, Grand Mogul, Caroline Testout, and Fisher Holmes. Messrs. B. R. Cant & Sons had some fine blooms, as also Messrs. Frank Cant and Co.

In class 2, for forty distinct trebles, the renowned Irish firm of Messrs. Alex. Dickson & Son, Newtownards, co. Down, secured first, though the second prize lot from Messrs. B. R. Cant & Sons, Colchester, was pretty close; Messrs. F. Cant & Co., Braiswick Nursery, Colchester, formed a fair third. The Newtownards blooms were larger and finer, though the dampness and the journey caused them to lose some of their first freshness. Messrs. Dickson's exhibit included Ulrich Brunner, Duchess of Albany, Madame Cusin, Souvenir d'un Ami, John Ruskin, Robert Scott, Mildred Grant,* Her Majesty, Alice Lindsell, Lady Moyra Beaulerc, Florence Pemberton, "Mamie," Comtesse de Nadaillac, Marquise Litta, The Bride, and Mrs. W. J. Grant,* also Mrs. John Laing, Souvenir de S. A. Prince, A. K. Williams, Marchioness of Londonderry, Suzanne Marie Rodocanachi, La France, Caroline Kuster, Horace Vernet, Countess of Caledon, Earl Dufferin, Madame Gabriel Luizet, Alfred Colomb, Marchioness of Dufferin, Capt. Hayward, Alice Grahame, Tom Wood, Caroline Testout, Gustave Piganeau, Ulster, Comtesse de Serenye, Bessie Brown,* Marchioness of Downshire, and Etienne Levet. Those marked with an asterisk were the best. The finest blooms in Messrs. Cant's exhibit were White Maman Cochet, Madame Cusin, H.P. Madame Eugène Verdier, H.P. Le Havre, Her Majesty, A. K. Williams, and Gustave Piganeau.

Division B.—Messrs. J. Townsend & Sons, Lower Broadheath, Worcester, carried off first prize for forty-eight blooms, distinct. They staged a rather poor exhibit, including in the back row Ulrich Brunner, La France, Gustave Piganeau, Madame Joseph Combet, Capt. Hayward, Caroline Testout, Etienne Levet, Alf. Colomb, Mrs. Ed. Mawley, Marchioness of Londonderry, Countess of Oxford, Her Majesty, and Bessie Brown. In second row: Killarney, Maman Cochet, Souvenir d'Elise, Heinrich Schultheis, Souvenir de S. A. Prince, A. K. Williams, Marchioness of Dufferin, Tom Wood, Comtesse Panisse, Comte Raimbaud, Innocente Pirola, Salamander, poor; and The Bride. Front row: Duke of Edinburgh, Kaiserin A. Victoria, fair; Duke of Connaught, Madame Gabriel Luizet, Madame Hoste, Pride of Waltham, Mrs. Sharman Crawford, Lady Sheffield, grand colour; Clio, good; Dupuy Jamain, Caroline Knster, Louis Van Houtte, and Robt. Duncan. Messrs. J. Burrell & Co. were second, and third Messrs. G. & W. H. Burch, Peterborough.

Mr. Geo. Prince, Longworth, Berks led first for two dozen blooms, distinct. His were amongst the best selected and finest Roses in the show, having smoothness of petal and purity of colour. Back row: Bessie Brown,* Her Majesty,* Maman Cochet,* Bridesmaid, Horace Vernet, Muriel Grahame, A. K. Williams, and Ulster. Second row: Kaiserin Victoria*, Mildred Grant, Louis Van Houtte, Mrs. J. Laing, Souvenir de S. A. Prince, Catherine Mermet, Madame Gabriel Luizet, and Golden Gate. Front row: Beauty of Waltham, The Bride, Souvenir d'un Ami, La Fraicheur, Prince Camille de Rohan, Rubens, Tom Wood, and Mrs. E. Mawley.* Second prize in this class was awarded to Mr.

C. Turner, Slough, who had not so good blooms, nor staged them to so much effect as Mr. Prince. Mr. John Mattock of Oxford was third. There were eight entries.

In class 5, for twenty-four distinct trebles, Messrs. Geo. Cooling and Sons, nurserymen, Bath, were first with blooms not so very fresh. Marchioness of Londonderry was good, also Kaiserin Victoria; other blooms were Countess of Caledon, Francisca Krüger, Caroline Testout, Ulrich Brunner, Bessie Brown, Ulster, Marquise Litta, Lanrence Allan, Comtesse de Nadaillac, Madame Chas. Wood, Ferdinand Jamain, White Maman Cochet, Killarney, Xavier Olibo, Helen Keller, Her Majesty, Gustave Piganeau, Mrs. W. J. Grant, Capt. Hayward, Mrs. Ed. Mawley, Duke of Fife, and Maréchal Niel. Mr. J. Mattock was second, and third Mr. C. Turner. Five entered.

Teas and Noisettes.

Messrs. D. Prior & Sons, Colchester, led off for twenty-four blooms, distinct, having a magnificent and even lot. Maman Cochet, Souvenir de S. A. Prince, Ernest Metz, Innocente Pirola, Madame de Watteville, Comtesse de Nadaillac, Souvenir d'un Ami, The Bride, Cleopatra, Marie Van Houtte, Muriel Grahame, Maréchal Niel, Medea, Francisca Krüger, Catherine Mermet, Alba Rosea, Souvenir d'Elise, Hon. Edith Gifford, Ethel Brownlow, White Maman Cochet, Bridesmaid, Caroline Kuster, Madame Hoste, and Mrs. E. Mawley were staged. Every bloom was almost perfect; a splendid and highly creditable exhibition. Mr. George Prince, of Oxford, was clearly behind, though his blooms of Maman Cochet, White Maman Cochet, Muriel Grahame, and Bridesmaid were large, smooth, handsome, and good. Messrs. B. R. Cant and Sons came third with an even display.

Mr. John Mattock, New Headington, Oxford, won first prize for twelve distinct varieties, and included in his stand the silver medal Tea Rose, a perfect specimen of Souvenir d'Elise Vardon. He also had Comtesse de Nadaillac, The Bride, Maman Cochet, Souvenir de S. A. Prince, Princess of Wales, Marie Van Houtte, Madame Cusin, Catherine Mermet, Muriel Grahame, Ethel Brownlow, and Medea. Messrs. J. Burrell & Co., Cambridge, formed a close second; and third, Messrs. Harkness & Sons. This latter entry had magnificent blooms of Maréchal Niel, Madame Cusin, and Ernest Metz. Nine entered.

In class 8, for sixteen distinct trebles, the award was here given to Mr. Geo. Prince, who had a very fair display. His varieties were Maman Cochet, Souvenir de S. A. Prince, Mrs. E. Mawley, Maréchal Niel, Souvenir d'un Ami, White Maman Cochet, Bridesmaid, Innocente Pirola, The Bride, Madame de Watteville, Comtesse de Nadaillac, Catherine Mermet, Muriel Grahame, Madame Cusin, Alba Rosea, and Ernest Metz. Messrs. B. R. Cant & Sons as second had good samples of Madame Hoste, The Bride, Madame Cusin, Ethel Brownlow, Maman Cochet, and Souvenir d'un Ami. Messrs. D. Prior & Sons were strong as third. Maréchal Niel was here again well shown.

For twelve distinct varieties, to include not more than six varieties of Teas or Noisettes, seven blooms of each, space 6 feet by 3 feet, the Oxford Roses from Mr. Geo. Prince won for him the first award. He staged lovely blooms of Maman Cochet, Mrs. W. J. Grant, Maréchal Niel, Bessie Brown, K. A. Victoria, Caroline Testout, A. K. Williams, Souvenir d'un Ami, Capt. Hayward, Innocente Pirola, Comtesse de Nadaillac, Fisher Holmes, and Souvenir de S. A. Prince above a grounding of black velvet (see illustration of Mr. Prince's group on page 31). The second prize was captured by Messrs. Harkness and Sons with more H.P.'s in their collection; these were all very fine, however. Mr. Geo. Prince was again first in class 10, for nine Teas, having Maman Cochet, Mrs. E. Mawley, Bridesmaid, Bride, Madame Hoste, Souvenir de S. A. Prince, Souvenir d'un Ami, Madame Cusin, and White Maman Cochet. Second prize went to Mr. John Mattock of Oxford with Comtesse de Nadaillac, Madame Cusin, Bridesmaid, Marie Van Houtte, Souvenir de S. A. Prince, Hon. E. Gifford, Souvenir d'un Ami, Princess of Wales, and The Bride.

Garden or Decorative Roses.

Messrs. Paul & Son, the Old Nursery, Cheshunt, secured the premier prize, a much coveted honour, in class 11, for three dozen distinct varieties, not less than three trusses of each, space 12 feet by 3 feet. Their magnificent group contained H.T. Camoens, pink; H.T. Madame Pernet Ducher, white; H.T. Marquis of Salisbury, scarlet crimson; Alister Stella Gray (N.), ivory; Turner's Crimson Rambler, W. A. Richardson (N.), Paul's Carmine Pillar, Polyantha Hélène, rugosa Souvenir de C. Cochet. In second line there were H.T. Reine Olga de Wurtemberg, rose crimson; Rosa Alba, H.T. Madame Jules Grulez, soft rose pink; Wichuriana Pink Roamer, H.T. Madame A. Chatenay, H.T. Grand Duc de Luxembourg, rose pink; Rosa Macrantha, H.T. Dawn, bright rose pink; Old White Moss. Again, M. Falcot (T), H.T. Gruss au Teplitz, crimson scarlet; H.T. Killarney, H.T. Lady Battersea, Madame P. Cochet (N.), rugosa atro-purpurea, Rosa Mundi, lucida plena, Madame Guinoisseau, Crested Moss, China Cora, a pretty sort; and some others. These were all very fine indeed. Messrs. Geo. Cooling & Son, Bath, made a very strong second, with splendid vases of Safrano, Dr. Rouges, Cooling's Yellow Noisette, Hélène, Dr. Grill, Marquis of Salisbury, Madame Falcot. Mr. J. Mattock of Oxford was disqualified, but his display was as fine as those of his neighbours.

In class 12, for eighteen bunches, distinct, Mr. Geo. Prince of Oxford led the way with a display that could hardly have been bettered. Marquis of Salisbury was here, also moschata alba, W. A. Richardson,

Gustave Regis, Rainbow, Turner's Crimson Rambler, Papillon, Madame A. Guinoisseau, and White Provence were each superb. Messrs. F. Cant & Co., as second, had beautiful displays of Queen Mab, Madame Jules Grolez, Rainbow, and others. Mr. Chas. Turner was third.

Open General Section.

In class 13, for twelve blooms of Hybrid Teas, first went to Mr. Hugh Dickson, of the Royal Nurseries, Belfast, with fine blooms of Marquise Litta, Caroline Testout, Souvenir de President Carnot; second, Messrs. B. R. Cant & Sons; third, Messrs. D. Prior & Sons. In class 14, for twelve blooms of any white or yellow Rose, the lead was taken by Messrs. D. Prior & Sons with handsome blooms of Bessie Brown;

Sons led with magnificent flowers of a Hybrid Tea named Mildred Grant. One bloom in this box was awarded the silver medal as the best Hybrid Tea in the show. It is a white tinted pink flower of fine proportions. The second went to Messrs. Frank Cant & Co. with Bessie Brown; and third to Messrs. B. R. Cant & Sons with blooms of Papa Lambert.

Class 19, for twelve blooms, distinct, new Roses, first Messrs. Alex. Dickson & Sons with varieties mostly of their own raising. The best were Robert Scott, Lady Moyra Beauclerc, and Bessie Brown. Second, Messrs. Perkins & Sons, whose stand contained a fine bloom of Ulster; and third, Messrs. Frank Cant & Co.

In class 20, for new seedling Roses, Messrs. J. Veitch & Sons, Ltd.,



ROSE GOLDEN QUEEN. (See page 32.)

second, Mr. G. Prince, with Comtesse de Nadaillac; third, Mr. John Mattock, exhibiting Marie Van Houtte.

Class 15, for twelve blooms of any light or dark crimson, first Messrs. B. R. Cant & Sons with bright flowers of A. K. Williams; second, Messrs. J. Townsend & Sons, with Captain Hayward; third, Messrs. D. & W. Croll with bright flowers of Duke of Edinburgh. Class 16 was for a dozen flowers of any light pink Rose. The first prize was won by Messrs. G. & W. Burch with grand blooms of Her Majesty; second, Messrs. Perkins & Sons, with the same variety; third, Mr. Hugh Dickson, with Caroline Testout. Class 17, for twelve blooms of any Tea or Noisette, the first prize was won by Messrs. Alex. Dickson & Sons with Mrs. Edward Mawley, a fine variety of their own raising. The second fell to Messrs. Harkness & Sons with Maman Cochet; and third to Mr. Geo. Prince with the same variety. Class 18, for nine blooms of any new Rose, Messrs. Alex. Dickson and

received the gold medal for their Rambler Queen Alexandra. A gold medal was also awarded to Tea Rose Mrs. B. R. Cant from Messrs. Cant & Sons. It is a rose-coloured Tea-scented variety, possessing grand qualities.

Decorative Classes.

A decoration of cut Roses, space 8 feet by 3 feet. The first prize was splendidly won by Miss West, Reigate, with a light arrangement of yellow, buff, and white; second, Mrs. Patrick R. Green; and third, Mrs. Mattock. Class 22, three sprays of Roses suitable for ladies' wear: First, Mr. Mattock; second, Mrs. O. G. Orpen; third, Messrs. Perkins and Sons. Class 23 asked for twelve distinct single flowered Roses. The lead was taken by Messrs. Paul & Son with a charming exhibit; second, Messrs. Frank Cant & Co.; third, Mr. Charles Turner. For nine distinct Roses suitable for buttonholes, first was won by Mr.

Mattook, whose exhibit was composed of small buds of well known Tea varieties; second, Mr. Geo. Prince.

Amateurs, General Section.

Champion Class.—The amateurs' champion challenge trophy is valued at 50 guineas, and the winner, besides being holder of the trophy for the year, also receives a memorial replica of the trophy. Mr. E. B. Lindsell, Bearton, Hitchin, was placed first. He has won this coveted prize a number of times, and his thirty-six blooms on this occasion were up to the average standard, though not the finest he has shown. The back row included Her Majesty, Capt. Hayward, Maman Cochet, Earl Dufferin, Ulster, speckled and poor; Marie Baumann, Madame de Watteville, Marquise Litta, Gustave Piganeau, Maman Cochet, Bessie Brown, F. Michelon, Ulrich Brunner, Mrs. Ed. Mawley, Fisher Holmes, La France, Alf. Colomb, Souvenir d'Elise Vardon, Horace Vernet, Madame de Watteville, Comte Raimbaud, Comtesse de Nadaillac, A. K. Williams, Innocente Pirola, Prince Arthur. Front row: Merveille de Lyon, Duc d'Orleans, Marchioness of Londonderry, Dupuy Jamain, Madame Cusin, Madame Hausman, Muriel Grahame, Mrs. J. Laing, Beauty of Waltham, Marie Verdier, The Bride, and Helen Keller. Rev. J. H. Pemberton, Havering-atte-Bower, Essex, made a strong second; and Mr. A. Slaughter, Jarvis Villa, Steyning, came third. In class 26, for twenty-four blooms, distinct (open to all amateurs who have not previously won either the champion challenge trophy or the first prize in this class), Mr. W. Boyes, 30, Dnfield Road, Derby, came off with premier honours. His stands contained Comtesse de Nadaillac, Madame Eugénie Verdier, Marchioness of Londonderry, Gustave Piganeau, Her Majesty, A. K. Williams, White Maman Cochet, Auguste Rigotard, Duchess of Bedford, Suzanne Marie Rodocanachi, Medea, Denmark, Madame Joseph Combet, Caroline Testout, Kaiserin A. Victoria. Front row: Niphetos, Horace Vernet, Madame Cadeau Ramey, Duo d'Orleans, Madame Gabriel Luizet, Innocente Pirola, and Comte Raimbaud. Mr. Conway Jones, Hucclecote, Gloucester, was a fair second; and third Mr. Alf. Tate, Downside, Leatherhead. There were eight entries; two extra prizes were given.

Division D.—In the above the exhibitors must be growers of less than 2000 plants. For twenty-four distinct varieties there were three entries, Mr. E. M. Bethune securing the first prize with a good level exhibit. The varieties were Mrs. J. Laing, Alfred Colomb, Kaiserin A. Victoria, Madame Gabriel Luizet, Maman Cochet, Gustave Piganeau, Bessie Brown, Charles Lefebvre, Ulrich Brunner, Bridesmaid, Madame Cusin, Mrs. E. Mawley, Victor Hngo, Catherine Mermet, Fisher Holmes, Margaret Dickson, Madame de Watteville, La France, Duke of Edinburgh, Comtesse de Nadaillac, Muriel Grahame, Caroline Testout, The Bride, and A. K. Williams. Mr. A. Slaughter came second with good blooms of Mrs. J. Laing, La France, Her Majesty, Marie Baumann, Marie Verdier, and Ethel Brownlow, while Mr. W. C. Romaine came in third.

In the class for eighteen blooms, distinct, three competitors entered the field. Mr. R. Foley Hobbs, Thorneloe, Worcester, who had numerous varieties of Teas. The varieties were Her Majesty, Kaiserin Augusta Victoria, A. K. Williams, Maréchal Niel, Mrs. W. J. Grant, Sonvenir de S. A. Prince, Caroline Testout, Maurice Bernardin, Killarney, White Maman Cochet, Bessie Brown, Medea, Souvenir d'un Ami, Souvenir de President Carnot, Horace Vernet, White Lady, grand; and Innocente Pirola. Mr. Edward Mawley followed with capital blooms of Maréchal Niel, Etienne Levet, Ulrich Brunner, and Mrs. J. Laing; and Mr. R. E. West, Reigate, third.

For eight distinct varieties, three blooms each, we had six entries, a really fine class, the first prize going to Mr. E. M. Bethune, who staged Maman Cochet, Ulrich Brunner, Madame Cusin, The Bride, Kaiserin Augusta Victoria, Camille Bernardin, Catherine Mermet, and Madame Gabriel Luizet. Mr. R. Foley Hobbs must have been a close runner for first place, his trebles of Her Majesty, Mrs. E. Mawley, and Bessie Brown being good, while Mr. Conway Jones, Hucclecote, Gloucester, was third. For nine blooms one variety there were five entries, Mr. R. Foley Hobbs winning well with good blooms of Mrs. J. Laing. Mr. F. W. Tattersall was second with Bessie Brown, and Mr. E. M. Bethune third with Madame Gabriel Luizet.

Division E.—This was open to growers of less than one thousand plants. The premier class here was that devoted to twelve varieties, distinct, for which there were no less than nineteen entries, and Miss Beatrice Langdon is to be congratulated on beating so many competitors. The stand was undoubtedly a good one, the varieties being Gustave Piganeau, Caroline Testout, Captain Hayward, La France, Mrs. J. Laing, Kaiserin Augusta Victoria, Mrs. W. J. Grant, Maman Cochet, Horace Vernet, Mrs. S. Crawford, Général Jacqueminot, and Bridesmaid. Mr. W. J. Pegge, Beeston, Notts, was a splendid second, and Mr. John Bateman, Highgate, third.

For six blooms of any variety there was a good entry of nine. Mr. M. Whittle, Belgrave, Leicester, was placed first for six superb blooms of Her Majesty; while Mr. G. Morris, Cank Street, Leicester, came second with the same variety; and Mr. F. Wellesley, Woking, was third also with Her Majesty.

The growers of less than 500 plants turned out well with some good blooms. Their chief class was for nine blooms, distinct. Here we had sixteen entries. Mr. E. A. Moulden, Bandara, Stevenage, was first with good blooms of Innocente Pirola, Comte Raimbaud, and the Hon. E. Gifford. Mr. R. W. Bowyer, Hertford Heath, was

second with good flowers of Bessie Brown and Maman Cochet; and Mrs. Times, Bedford Road, Hitchin, third.

In the class for six blooms, distinct, there were fourteen entries, but Mr. K. H. Gifford, Sutton, secured premier place with Her Majesty, Suzanne Marie Rodocanachi, Etienne Levet, Mrs. J. Laing, Marchioness of Londonderry, and Chas. Lefebvre. Mr. R. Boswell, Hitchin, was second, having a good bloom of Maman Cochet, and Mr. W. Upton third; while for six blooms of any Rose there were fourteen entries, and Mr. G. A. Hammond was first with a good box of Her Majesty, Mr. K. H. Gifford following with sweet blooms of Mrs. J. Laing, and Mr. R. W. Bowyer third with Caroline Testout.

The premier class contested by the exhibitors in the two last sections was for twelve distinct varieties, the first prize being a challenge cup, which was keenly contested; the first prize going to W. Kingston, Esq., 52, Waterloo Road, Bedford. The varieties were Her Majesty, A. K. Williams, Marchioness of Londonderry, Charles Lefebvre, Chas. Darwin, White Maman Cochet, Duke of Teck, Mrs. J. Laing, President Carnot, Dupuy Jamain, Caroline Kuster, and Prince Arthur. Mr. F. Dennison, Handsworth Wood, Birmingham, made a capital second, and Mr. G. Moules, Hitchin, was third.

For four trebles there were five entries, the first position falling to the Rev. F. Page Roberts, Halstead Rectory, Sevenoaks, for a splendid exhibit; the varieties were Kaiserin Augusta Victoria, Marquise Litta, Mrs. R. Sharman Crawford, and Bessie Brown. Mr. M. Whittle was second, and Mr. J. Bateman third.

The Ramsey Challenge Cup,

For twelve blooms, brought out ten entries, Mr. O. G. Orpen proving invincible with a grand box. The varieties were Maman Cochet, White Maman Cochet, Her Majesty, Mrs. Ed. Mawley, superb; Innocente Pirola, Catherine Mermet, Maréchal Niel, François Dubreuil, Caroline Testout, The Bride, Madame Cusin, and Bessie Brown. The Rev. J. H. Pemberton was second with typical blooms of Ulrich Brunner, Mrs. W. J. Grant, Mrs. John Laing, and A. K. Williams; while Mr. P. G. C. Burnard was third. The class for six distinct blooms, open only to those who have never won a prize before. Here Mr. W. B. Martin, Finchley, scored with a neat box, the best blooms being Alfred Colomb, Suzanne Marie Rodocanachi, and Mrs. J. Laing. Mr. H. Walters, Eastwell Park, Ashford, was second, and Mrs. W. H. Lascelles was third.

The class for six blooms, not less than four varieties, under the same conditions, the first prize was handsomely won by Mr. A. C. Turner, Sutton, Edgware, with a capital box of Teas, the best being Comtesse de Nadaillac, Innocente Pirola, and Catherine Mermet; the second place going to Mr. W. G. Adcock, North Finchley; and Mr. Montague White, Watlington, was third. For six blooms, distinct varieties, open only to amateurs who have joined the Society since the last metropolitan exhibition, Mr. C. J. Page, Earldoms, Enfield, was first with good typical flowers of Bessie Brown, Mrs. J. Laing, Mrs. W. J. Grant, and White Maman Cochet; the second place falling to Miss B. H. Langton, who had good flowers of Maman Cochet and Captain Hayward; and Mr. T. E. Raven, Uppingham, was third.

The challenge cup for growers living within eight miles of Charing Cross produced a fair display, which included some good Roses. The victor proved to be Mr. E. R. Smith, Muswell Hill, who staged good blooms of Général Jacqueminot, Mrs. J. Laing, and Captain Hayward; the second award going to Mr. W. B. Martin, Finchley; and the third to Mr. J. T. Thompson, Bound's Green. For six blooms of new Roses there were four entries, the Rev. J. H. Pemberton taking first with rather small fresh blooms of Shandon, Bessie Brown, Tennyson, Killarney, Lady Mary Curry, and Ard's Rover; Mr. F. W. Tattersall was a good second with good blooms of Mrs. E. Mawley and Ulster; and Mr. J. Bateman third.

National Trophy.

This trophy for Teas and Noisettes, eighteen blooms, distinct varieties, was well won by Mr. O. G. Orpen, who staged excellent blooms of Maman Cochet, Innocente Pirola, Madame de Watteville, Mrs. E. Mawley, Comtesse de Nadaillac, Cleopatra, Madame Cusin, Souvenir d'Elise Vardon, The Bride, Bridesmaid, Muriel Grahame, Ernest Metz, Maréchal Niel, Souvenir de S. A. Prince, White Maman Cochet, grand; Catherine Mermet, and Jean Ducher. Mr. Alexander Hill Gray, Bath, was second with good flowers of Maréchal Niel, Cleopatra, Madame Cusin, Maman Cochet, Catherine Mermet, and Souvenir d'Elise Vardon, while Mr. Conway Jones brought up the rear.

For twelve blooms, distinct, there was a capital contest. Mr. Alfred Tate, Leatherhead, proved the first prizewinner with Maman Cochet, Ethel Brownlow, The Bride, Niphetos, Madame Cusin, Maréchal Niel, Souvenir d'Elise Vardon, Innocente Pirola, Golden Gate, Ernest Metz, and Caroline Kuster. Mr. A. Hill Gray was again a good second with conspicuous blooms of Maman Cochet, Maréchal Niel, Bridesmaid, and White Maman Cochet, while Mr. F. W. Flight, Cornstiles, Twyford, was third.

In the class for eight trebles there were four contestants. Here Mr. A. Hill Gray proved invincible, his box being fresh and very level. The varieties were Maréchal Niel, The Bride, Maman Cochet, Comtesse de Nadaillac, Madame Cusin, Medea, Souvenir d'un Ami, and Catherine Mermet. Mr. O. G. Orpen came next with splendid examples of Madame Cusin, Innocente Pirola, Catherine Mermet, and Maman Cochet. Mrs. F. W. Campion, Trumpets Hill, Reigate, was third

In the class for nine blooms, one variety, there were five competitors, Mr. O. G. Orpen winning with White Maman Cochet, a superb box. Mr. A. Hill Gray followed closely with Maman Cochet; and Mr. E. M. Bethune was third with the same variety.

The three following classes were open to growers of less than 500 plants:—For twelve blooms, distinct, the Rev. F. Page Roberts was first with a fresh clean board; the best varieties were Souvenir d'Elise, Maman Cochet, Madame Hoste, Innocente Pirola, and Medea, the Rev. R. Powley, Warminster, following close up with an attractive exhibit; the following blooms were conspicuous—Maman Cochet, Bridesmaid, Comtesse de Nadaillac, and The Bride; and Mr. F. Wellesley was third.

A good class was that for nine blooms, distinct. Mr. R. Foley Hobbs was here well to the fore with some really good blooms, Souvenir d'un Ami, Cleopatra, Mrs. E. Mawley, and Marie Van Houtte were most conspicuous. Miss B. H. Langton staged well for second place, showing good flowers of Maman Cochet, Ethel Brownlow, and Bridesmaid; the

attractive class, Mr. R. F. Hobbs adding to his victories. The best were Caroline Kuster, Souvenir d'un Ami, and Souvenir de S. A. Prince. The Rev. R. Powley followed with some neat triplets.

A class for six blooms, not less than three varieties, for novices produced eight competitors, the first position being awarded Mr. T. B. Gabriel, Woking, who had a good bloom of Souvenir d'Elise Vardon. Mr. W. R. Hammond, Burgess Hill, followed, and Mr. F. H. Cooke, Colchester, was third.

Decorative Classes.

For nine vases of exhibition Roses there were only two competitors, but Mr. H. V. Machin, Worksop, won well. The varieties were Mrs. J. Laing, Captain Hayward, Mrs. W. J. Grant, Kaiserin Augusta Victoria, Ulrich Brunner, and Madame Gabriel Luizet; the second position being taken by Mrs. F. W. Campion.

The class for six distinct varieties of Teas or Noisettes, seven blooms each, proved more popular, there being no less than four competitors.



COLLECTION OF DECORATIVE ROSES.

(Exhibited by Messrs. Paul & Son. See Class 11.)

third prize fell to Mr. M. Whittle; while the class for six blooms, any one variety, was well patronised, there being twelve entries. Mr. Conway Jones was placed first for The Bride, really good blooms. Mr. R. Foley Hobbs followed with Marie Van Houtte, while Mrs. E. Hore, Reigate, brought up the rear with Maréchal Niel of good colour.

The three following classes were devoted to those growers of less than 200 plants, and opened with a class for nine blooms, distinct. There were thirteen boxes in competition, the first prize being allotted to Mr. A. Munt, Slough, who had neat flowers of Maman Cochet, Catherine Mermet, Ernest Metz, and The Bride. Mr. G. H. Baxter, Brentwood, was second, and Mr. F. W. Tattersall third. For six blooms, distinct, the competition was represented by eight growers. Mr. W. Upton, Belgrave, Leicester, came first with good flowers of Maréchal Niel, Princess of Wales, and Comtesse de Nadaillac. Mr. Montague White proved a good second with nice blooms of Bridesmaid, Mrs. E. Mawley, and White Maman Cochet; and Mr. R. W. Bowyer was third. For six blooms, one variety, there were nine entries. Mr. A. Munt made a good win with Maman Cochet; Mr. G. Mowles and Mr. J. Cobham Trueman, Swanley, following in the order named.

The class for four distinct varieties, three blooms each, made an

Mr. O. G. Orpen was well ahead, the vases being well arranged; the varieties were Innocente Pirola, Maman Cochet, Madame Cusin, Madame de Watteville, Sylph, and Catherine Mermet. Mr. A. Hill Gray came second, having good vases of Maréchal Niel, Maman Cochet, The Bride, and Innocente Pirola, while Miss B. Langton made a good third.

For a bowl of decorative Roses, arranged with Rose foliage only, only three good arrangements came. Mrs. Lewis Pawle, Rowsham, Harrow, was first with a good display of Killarney, followed by Mrs. O. G. Orpen, who used two varieties, while Miss B. Langton was third.

A decoration of cut Roses for dinner table, arranged with foliage, Ferns, or Grasses, made a lovely display. The first prize went to Mrs. O. G. Orpen, West Bergholt, Colchester, for a display of single Roses, Mrs. Arthur Cant, Colchester, following with a pretty arrangement of Perle d'Or, while Mrs. L. C. Fearon, Reigate, brought up the rear with a display of mixed Tea Roses. There were eight entries. For a vase of cut Roses there were ten entries, and Mrs. Lewis Pawle, Harrow, was first with Mrs. W. J. Grant; Mrs. Mawley, Rosebank, Berkhamsted, was second, and Mrs. Arthur Cant third.

Garden or "Decorative" roses.

This class was for eighteen varieties, not less than three trusses of each. These made a good display, and Mr. Alfred Tate secured the premier award; his best bunches were Crimson Rambler, Perle d'Or, Anna Marie Montravel, The Garland, Rêve d'Or, Hebe's Lip, Etoile d'Or, and W. A. Richardson, Mr. H. V. Machin being second, with good bunches of Conpe d'Hébé, Cecile Brunner, Crested Moss, Homère, and the Grand Duc A. de Luxemburg, and Mrs. F. W. Champion took third place.

Girdlestone Memorial Prize.—For twelve distinct varieties, not less than three trusses, Mrs. A. F. Perkins, Holmwood, Surrey, came first with splendid examples of Royal Scarlet, Marquis of Salisbury, Madame Pernet Ducher, Gloria Mundi, Paul's Carmine Pillar, and Camoens. Mrs. Dorothy A. Hastfield, Tonbridge Wells, was second with good examples of Polyantha Simplex, Anne of Gierstien, Aglaia, and The Garland. Miss B. H. Langton made a good third.

For six vases of Sweet Brier Roses there was a moderate display, Mrs. F. W. Champion winning first with some well displayed vases of Lady Penzance, Amy Robsart, Lucy Bertram, and Julia Mannering. Mr. O. G. Orpen was second with well displayed bunches, and Mr. G. H. Baxter was third.

The class for six bunches of garden Roses brought out three entries, the first position being taken by Mr. W. G. Adcock, North Finchley, who staged Félicité Perpetué, Gustave Regis, and Irene Watts in good form. Mr. F. H. Cooke was second, and the Rev. F. J. Fulford, Newnham, was third.

Best Blooms.

Six of the Society's silver medals are awarded to six of the best blooms in the show, three medals to nurserymen, and three to amateurs. They were accorded as follows:—

Amateurs.—To Mr. R. Foley Hobbs, for best bloom other than Tea, H.T., or Noisettes, with Her Majesty; Mr. O. G. Orpen, for best Tea, with White Maman Cochet; for best H.T., Mr. G. Moules, with Bessie Brown.

Nurserymen.—Messrs. D. & W. Croll & Sons, Dundee, had the best bloom of any Rose other than H.T., T., or N., with Mrs. John Laing; best H.T., Messrs. Alex. Dickson & Son, Newtownards, with Mildred Grant; and the best Tea came from Mr. J. Mattock, this being a bloom of Sonvenir d'Elise Vardon.

Miscellaneous Exhibits.

The new rambler named Queen Alexandra from Messrs. J. Veitch and Sons, Ltd., was shown in over a dozen bunches.

Mr. J. Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., had an attractive exhibit of wire-trellis work and his "Acme" cast iron labels. West's Patent Rose-bloom Protector was also shown.

Messrs. Jackman & Sons received a silver-gilt medal for an arrangement of cut Roses not for competition. Messrs. Hugh Low & Co., Bush Hill Park, Enfield, staged a large exhibit of beautiful blooms, receiving a silver medal. Messrs. Bunyard & Co. of Maidstone were likewise the recipients of a silver medal for a display of cut Roses, embracing all sections, and consisting of handsome blooms. Mr. Wm. Spooner, Arthur's Bridge Nursery, Woking, staged a grand lot of decorative Roses, and received another of the silver medals. Messrs. J. Laing and Sons were forward with a handsome selection of cut Roses, including a number of the finest decorative rambler section, and splendid blooms of Mrs. J. Laing—silver-gilt medal. Messrs. J. Peed & Son, Roupell Park Nursery, West Norwood, were also Rose exhibitors, obtaining a silver medal.

Royal Horticultural, Chiswick, July 5th.

Present: Geo. Bunyard, Esq., in the chair, with Messrs. J. Hillard, S. Mortimer, Wm. Pope, Geo. Wythes, W. Marshall, H. Esling, W. Farr, A. Ward, Alex. Dean, and J. W. Bates.

The following trials in the Royal Horticultural Society's Gardens received awards of merit, unless where otherwise stated:—

PEAS.—1, Dwarf Telegraph, Messrs. Carter & Co.; 2, Danby Stratagem (later, and taller form than the ordinary Stratagem), Messrs. Carter & Co.; 3, Sharpe's Queen, Messrs. Sharpe & Co., Sleaford; 4, Prolific Late Marrow, Messrs. J. Veitch & Sons, Ltd.; 5, The Sherwood, from Messrs. Sutton & Sons; 6, Perfect Gem, also from Messrs. Sutton; 7, Prizewinner, first-class certificate, from Messrs. Sutton & Sons; 8, Selected Duke of Albany, Messrs. Sutton; 9, Centenary, Messrs. Sutton.

LETTUCES.—1, Cos variety Jumbo, Messrs. Barr & Sons, King Street, Covent Garden; 2, Cabbage Lettuce Duke of Cornwall, from Messrs. R. Veitch & Son, Exeter; 3, Cab. Lettuce New Yorker, Messrs. Barr; 4, Haibinger Forcing, *** (highly commended), Messrs. Barr.

Red-top Stump-rooted Turnip, from Messrs. J. Veitch & Sons, Ltd.

The following entry was made:—The members of the committee present desire to express their opinion that the Pea trials of 1901 are the most extensive and the best cultivated that have been examined at Chiswick for some years, and their clean condition reflects great credit on the superintendent.

Isle of Wight Rose, June 28th.

On Friday, the 28th of June, the people of Ventnor, Isle of Wight, were furnished with a pretty little Rose show by the society devoted to the interests of this flower in the Island. We are pleased to report that the exhibition was one of the finest this southern society has held, both quantity and quality being above par. Mr. S. M. Mellor of Bembridge won the King's gold medal for a dozen distinct Rose blooms, and Mrs. E. Croft-Murray carried off the Isle of Wight challenge cup for the year, offered for the two dozen distinct blooms. In the nurserymen's open classes the prizes were pretty evenly distributed, though for twenty-four varieties of Roses, Messrs. B. R. Cant & Sons beat Messrs. F. Cant & Co. and Messrs. Townsend & Sons of Worcester. For twelve Teas or Noisettes, the order was: First, Messrs. F. Cant & Co.; second, B. R. Cant & Sons; third, D. Prior & Sons. The latter led, however, for twelve blooms of any one variety. Mr. S. M. Mellor did well in the amateurs' open and I.W. classes, being first for eighteen distinct, twelve distinct, four Teas or Noisettes, and second in the challenge cup class. Dr. Seaton of Bitterne, and Mr. H. J. Jolliff of Ryde, were second and third respectively for the eighteen blooms, distinct. Rev. G. E. Jeans of Shorwell, Mr. G. Williams, Rev. J. Shearme, C. A. Colenutt, Mrs. Disney Leith, Mrs. R. Cecil, Miss Ward, and Major Moulton-Barrett were others of the leading prizewinners.

Windsor, Eton, and District Horticultural, June 29th.

The tenth general horticultural exhibition held by this society passed on Saturday week on Fellows' Eyot, Eton College. Perhaps in another year the society may again hold its exhibition on the beautiful slopes of Windsor Castle, as it has done in former years, for the Eton situation is a trifle too far removed from Windsor. The show, from a gardener's point of view, was up to the average, some of the classes being stronger than ordinarily, while others were decidedly weaker. Roses were good on the whole, but fruit formed but a poor feature as a whole. Somehow or other fruit at local shows never bulks very largely, which fact is pleasing to those who think that beauty and utility are more largely combined in fruits than in many flowers and plants. More encouragement is required in both fruit and vegetable sections at four-fifths of our provincial shows. Cottagers' shows, of course, commendably place vegetable produce well in the forefront.

The non-competitive exhibits from members of the horticultural trade are generally numerous and good at Windsor. They were so on this occasion. Messrs. Barr & Sons had a very select and handsomely set-up hardy cut flower group, and Mr. Chas. Turner was also present with his Pelargoniums from Slough. Messrs. John Peed & Son staged a large selection of cut Sweet Peas and other hardy flowers; and a like exhibit came from Messrs. Cutbush of Highgate. The floral decorative work of Messrs. Titt & Son, Windsor, was specially admired, and formed a very helping feature of the show. The Chelsea firm of Messrs. J. Veitch & Sons, Ltd., staged a representative group of Pæonies, cut herbaceous flowers, &c., while Roses came from Messrs. F. Cant & Co. of Colchester, and different other exhibits from southern firms.

As noted last week at page 18, Messrs. B. R. Cant & Sons, The Old Rose Gardens, Colchester, succeeded in capturing the challenge cup valued at ten guineas, and given by the late Queen, from last year's winners, to wit, Messrs. A. Dickson & Sons. Messrs. D. Prior & Sons, Colchester, were second, and Messrs. A. Dickson & Sons third. In the amateur classes a new trophy was offered this year, called the Windsor cup, taking the place of the Ben Cant challenge bowl which Mr. Colin Romaine, of Old Windsor, won outright in two years—1889 and 1900. He followed up his success by winning the new cup the first time this year, but has to secure it three times before it can become his property. He was closely run by Mr. F. E. Layton, Windsor, who was a good second. The Dowager Duchess of Sutherland's new cup for the best display of cut Roses arranged in a space was won for the first time by Mrs. Irving, of Old Windsor, the last challenge cup being won outright twelve months ago, again by Mr. Romaine, but there were several opinions that the exhibit of Sir James Carmichael, which was given second place, was of equal merit. The silver medal offered by the National Rose Society for the best Rose in the professional classes went to Messrs. Dickson, Newtownards, Ireland, for a beautiful Mildred Grant Rose, and a similar honour was secured by Mr. Romaine for a Gustave Piganeau of carmine colour. In the classes for plants the entries were small in number, in several cases only one prize being awarded, which was the case also with the ladies' table decorations.

In the open classes for eighteen Tea or Noisette Roses, distinct, the Oxford Roses sent by Mr. Geo. Prince took first prize; the Messrs. B. R. Cant were second; and third Messrs. Prior. The Newtownards firm led for twelve distinct trebles; Messrs. Prior second; and Messrs. B. R. Cant third. Messrs. Prior, Prince, and B. R. Cant were placed so for a dozen trusses of Teas and Noisettes. Messrs. F. Cant & Co. were first for twelve single trusses of any H.P. or H.T. The chief winners in the amateurs' section were Mrs. Haywood (gardener, Mr. C. J. Salter), Rev. J. H. Pemberton, Rev. P. G. C. Burnand, Mr. Lindsell, Hitchin (chief winner in the amateurs' champion trophy class at the National); Mr. R. Foley-Hobbs, Rev. F. R. Burnside, Mr. R. E. West, Reigate; Colin Romaine, Esq. (gardener, Mr. Gutteridge); and Mr. G. A. Hammond, of Burgess Hill, Sussex.

Hereford and West of England Rose, July 2nd.

The thirty-fifth anniversary of this flourishing exhibition was held in the Shire Hall, Hereford, and, despite of a wet afternoon, an abnormally dry period some weeks before, and, perhaps worst of all, a drenching storm of wind and rain on the previous Sunday night, an excellent display of Roses was staged in every class, of which I ask your permission to give the public in our Rose Journal those leading features which would seem to be most generally interesting. Imprimis: It may be safely prophesied that as long as that enterprising Rose firm, Messrs. Dickson, supplement their Newtownards Rose nurseries by one at Ledbury, our old and formerly staunch friends from Cheshunt, Colchester, Bedale, Oxford, Slough, &c., will play no truant, as was the case, a veteran like myself remembers, some decades ago, when the King's Acre Roses were invincible in home quarters.

More unlikely events may happen again in history repeating itself under altered circumstances. Distance does not lend enchantment to the view, it seems, in the opinion of our big Rose exhibitors. No, they do not see their way, they can only come at a disadvantage, so decide to stay at home. We, of course, miss them very much, but how superbly Mr. Dickson exhibited, and what a host he was in himself, the fact of his carrying off every first prize, except one, in every class he could compete, is evidence sufficient. The second and third prizes were really good, but the decision of the judges was never in doubt for a moment. Especially noticeable in Messrs. Dickson's collection were the large number of their own seedlings and interesting in some cases from the fact of their being first introduced to the public. The following is a correct list of varieties in Messrs. Dickson's collection, with remarks on those especially promising or well shown.

Caroline Testout, superb; Ulrich Brunner, Mrs. John Laing, Charles Lefebvre, Marchioness of Londonderry, John Ruskin, most promising seedling; Danmark, Gustave Piganeau, Tom Wood, Alice Lindsell, great acquisition; Lonis Van Houtte, Mrs. R. G. S. Crawford, specially fine this year; Earl Dufferin, Maman Cochet, another Rose of the year; Lady Ashtown, promising seedling; White Lady, Emily Gonin, Alfred Colomb, Madame Gabriel Luizet, Comte Raimbaud, Innocente Pirola, grand; Sir Robert Stout, new; Ernest Metz, Marchioness of Dufferin, Her Majesty, fine; Exquisite, Ellen Drew, J. S. Mill, Lady Clanmorris, Dnpuy Jamain, Marchioness of Downshire, Charles Darwin, fine colour; François Michelon, Mrs. Grant, superb; Charles Gater, Mrs. Edward Mawley, Rose of the season; S. M. Rodocanachi, Florence Pemberton, new seedling; Prosper Langier, Countess of Caledon, Kaiserin Augusta Victoria, lovely; La France, Duchess of Portland, seedling, pretty; M. de Delville, Alice Grahame, seedling, good; Shandon, Niphetos, Mrs. Giles Kennedy, seedling; Lady Moyra Beauclerc, fine; Marie Rady, Mildred Grant, splendid; A. K. Williams, Ulster, Horace Vernet, exquisite; Bessie Brown, excellent; Madame Cusin, Robert Scott, new; Marjorie, Marie Baumann, White Cochet, Duchess of Bedford, Muriel Grahame, Duchesse de Mornev, Killarney,

very sweet and lovely; Madame Hoste, Général Jacqueminot, Margaret Dickson, Helen Keller, Souvenir de President Carnot, Marquise Litta, Comtesse Nadaillac, fine; Duc de Rohan. Second prize fell to Messrs. J. Townsend & Sons, Lower Broadheath, Worcester; third prize to King's Acre Nurseries, Hereford.

First prize, thirty-six varieties, Mr. John Mattock, Oxford; second prize, Messrs. Pewtress Bros., Tillington; third, Messrs. D. and W. Croll, Dundee. First prize, twenty-four varieties (three of each), Messrs. Dickson; second prize, Messrs. Townsend; third prize, Mr. John Mattock, Oxford. Hybrid Teas, twelve varieties.—First prize, Messrs. Dickson, with the subjoined excellent blooms: Bessie Brown, large and good; Caroline Testout, perfect; Mildred Grant, exquisite; Robert Scott, Countess of Caledon, Florence Pemberton, Lady Moyra Beauclerc, Alice Lindsell, fine; Kaiserin Augusta Victoria, Lady Mary Fitzwilliam, Margorie, Duchess of Albany.

In the Tea and Noisette division Messrs. Dickson were again to the front with a lovely well arranged collection, which included Mrs. Edward Mawley, perfect; Niphetos, Madame Cusin, splendid; Madame Caroline Kuster, Comtesse de Nadaillac, superb colour; Madame Hoste, White Cochet, Ernest Metz, The Bride, Souvenir d'Elise Vardon, splendid; Muriel Grahame, fine; Maman Cochet, Bridesmaid, Maréchal Niel, Madame de Watteville, Innocente Pirola, good; Catherine Mermet, Jean Ducher. Second prize, Mr. J. Mattock; third prize, King's Acre Nurseries.

In the open classes, which were especially well shown, the first prize for light Rose H.P.'s (twelve of a sort) fell to Messrs. Dickson with superb level blooms of Mildred Grant; second prize to Messrs. Townsend with Her Majesty; both collections so evenly good that the judges must have had some trouble to decide. First prize for any dark Rose was taken by King's



ROSE MRS. J. LAING.

Premier H.P. (N.R.S.) from Messrs. D. & W. Croll.

Acre Nurseries, and deservedly, with exquisite blooms of A. K. Williams, for once turning the tables on Messrs. Dickson, who took second prize with Ulrich Brunner. First prize for any yellow Rose: First prize, Messrs. Dickson, with Duchess of Portland, neat but small blooms; second prize, Messrs. Townsend, with Marie Van Houtte. First prize for any white Rose: First prize, Messrs. Dickson, with grand blooms of Bessie Brown; second prize, Messrs. Townsend, with larger but less smooth blooms of the same variety.

An interesting prize was offered by the president, Mr. Arkwright, for twelve distinct Roses, one truss of each, of natural growth and of characteristic habit, not disbudded, very charmingly carried off by the donor, showing by the contrast between the first and second prize how everything in competitions of this kind, where sentiment and taste are concerned, depends on the setting up.

In division 2, amateurs, Mr. Conway Jones, Gloucester, and Mr. R. F. Hobbs were the principal prizewinners in classes very well filled. The three National Rose Society's medals were awarded as follows:—Mr. R. Foley Hobbs, for his exhibit of Her Majesty, a grand bloom; second prize, Mr. Conway Jones, Innocente Pirola; and third prize to Rev. Preb. Ashley, A. K. Williams.

In the hardy perennial flower division one cannot help noticing a pleasing feature in the exhibition, the subdued and sombre shades of these plants standing out in groups in happy relief with the bright and somewhat garish colours of Queen Rosa. In the open class, thirty-six bunches, cut blooms, Mr. W. T. Mattock, Barton Nursery, Oxford, took first prize with an excellent collection; second prize, Mr. A. Lee, Lugwardine. In the amateur class:—First prize, Mr. Davenport, Foxley; second prize, Rev. Sir G. H. Cornwall, Moccas Court.

It only remains to mention that the judges were Mr. Conway Jones, Mr. Dickson, Mr. Southall, and Mr. Cranston, and to wish the venerable society many more successful seasons, which, with £50 balance on the right side, and the Rev. Preb. Ashley as the right man as hon. sec., she appears to deserve.—HEREFORDSHIRE INCUMBENT.

Southampton Royal Horticultural, July 2nd and 3rd.

The grand Rose show and miscellaneous exhibition of flowers, fruit and vegetables, was held successfully on Tuesday and Wednesday, the 2nd and 3rd inst. The venue was on the Royal Pier, where music was delightfully rendered, and the show enjoyed. The success of the exhibition was due to the good working arrangements of the committee, and to Mr. C. Fridge's indefatigable care as hon. secretary. The first day opened dull and showery, but the Wednesday was bright and pleasant. Most of the large Colchester, Cheshunt, Oxford, and other Rose firms staged admirable blooms, while groups of plants and Orchids from private or trade growers otherwise tended to furnish a grand show. Hardy plantmen were numerous, and each in his place staged select groups or exhibits. The pressure on our pages during these busy show weeks prevents our noticing such exhibits in any detailed manner, and where they are numerous it is, perhaps, best to omit reference to any one in particular, to the exclusion of others. We may be excused for making special mention of Mr. Gibson's magnificent exhibit of six kinds of vegetables, staged in competition, and beating Mr. Beckett of Aldenham House. It is a grand sign when such doughty champions meet in competition in this wise, and vegetable growing should receive an impetus. It is to be hoped that other, and probably younger, growers will endeavour to excel the efforts of Messrs. Gibson and Beckett. The gardeners of Lord Bolton and Lady Theodora Guest were respectively first and second in another vegetable class for six kinds, the prizes being given by Messrs. Toogood & Sons of Southampton, first prize 4 guineas. In the other large vegetable class Messrs. Sutton & Sons provided the prizes, of which there were seven, the first being £4.

Mr. J. Bowerman, gardener to Lord Bolton, Hackwood Park, Basingstoke, won for three distinct varieties of Grapes, and also for two black Grapes.

Medals were given to Messrs. B. Ladhams, Ltd., Shirley Nurseries, for a collection of hardy flowers and ornamental group of rock, alpine, and other plants (silver medal); to Messrs. W. H. Rogers & Son, Ltd., Red Lodge Nursery, for group of plants and collection of cut flowers (bronze); to Messrs. Jarman & Co., Chard, for Roses and other cut flowers (bronze); to Mr. W. Garton of Roselands for a group of foliage plants (silver medal). The Rev. J. Macdonald for thirty-six varieties of Sweet Peas was awarded one of the society's certificates.

The Queen Victoria Memorial challenge trophy was on view. This will form the premier prize at the autumn Chrysanthemum show of the society. It is a very handsome cup, valued at £40, which has been raised by public subscription, and will be held for the year by the winner, who will also receive the society's silver medal. Any exhibitor who wins this trophy three times (not necessarily in succession) will receive the society's gold medal. Another feature is the society's new certificate, which is a very artistic production, well worth framing. The judges of the fruit and vegetable section were Messrs. E. Molyneux, V.M.H., and G. Nobbs of Osborne. Cut flowers: Mr. W. Drover and Mr. W. Neville. Roses, division A: Messrs. Drover and Neville; division B: Messrs. Prince and Croll.

The Messrs. B. R. Cant beat Messrs. Prior in the open Rose class for thirty-six blooms. These two competitors were the most prominent in the other open Rose classes. Messrs. D. & W. Croll, Dundee, N.B., and Geo. Prince were also forward and won prizes. For a group of Orchids Messrs. Hooley Bros. of Bittern Park were awarded first place.

Hanley, July 3rd and 4th.

A splendid display of garden produce was brought together on the above dates in Hanley Park. Fruits, vegetables, flowers, and plants were all represented by excellence of quality as well as numbers, and five large marquees were required for their accommodation. This is the fifth floral fête at Hanley, and if the exhibition continues to grow in the same proportion in the future, it will soon rival Shrewsbury in extent and magnificence. All kinds of attractions were added to the floral section, and trainloads of people followed one another into this Staffordshire pottery town to see the flowers and enjoy the amusements. The superintendent of the splendid Hanley Park acts as secretary of the show, and a better man could not easily be found.

Taken as a whole, fruit formed the best section of the show. Every kind now in season was represented, and with the exception of the classes for white Grapes a very high standard of excellence was maintained. There were two classes for collections, of which Mr.

W. Nicholls, gardener to Lady Beaumont, Carlton Towers, Yorks, won the larger; and Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., M.P., Hutton Hall, Guisborough, the smaller. Mr. Nicholls' Black Hamburg Grapes were good, but the Buckland Sweetwater were not up to the mark. Nectarine Early Rivers was very small, and the Strawberry dish looked to contain two varieties instead of one. Peach Dymond was a fine colour. Mr. F. Jordan, Impney, who was a close second, had good Hamburg Grapes and Lord Napier Nectarines, with splendid Mentmore Strawberries. In Mr. McIndoe's collection of six dishes there were Grapes Black Hamburg and Muscat of Alexandria, Peach Dymond, Nectarine Stanwick Elruge, Strawberry Royal Sovereign, and Melon Yorkshire Beauty. Mr. J. Read, gardener to the Earl of Carnarvon, Bretby Park, followed.

There were several Grape classes in which Black Hamburg and Buckland Sweetwater were well shown, Madresfield Court was generally unfinished. Nectarines were splendidly shown, Mr. J. Read winning the single dish class with Lord Napier and the two dishes with Lord Napier and Pine Apple. Peaches were scarcely so good. Mr. G. F. Goodill, gardener to Mrs. Meakin, Stone, was to the fore in the single dish class with Royal George, and Mr. W. Nicholls in the pair with Royal George and Dymond. A superb dish of Mentmore gave Mr. Jordan the first prize for a dish of Strawberries; Mr. Wingfield, gardener to Sir Delves Brington, Doddington Park, Nantwich, following with Royal Sovereign. Melons were capably shown by several growers.

The new century class for British garden produce resulted in a victory for Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Hall, Derby, with 102½ points out of a possible 151. Mr. J. Read, Bretby, was second with 96 points. This class would have been more interesting had not Mr. J. McIndoe, V.M.H., been disqualified for including one dish of fruit over the proper number. He would have been exceedingly close to Mr. Goodacre, even if he had not beaten him. In each case the fruit and vegetables (nine dishes of each) were well chosen and staged, but the floral arrangements were not so elegant as they should have been in a class of such great importance. The vegetable section brought some excellent exhibits, especially when the earliness of the date and the dry weather are taken into consideration. Mr. A. H. Hall, gardener to C. Waterhouse, Esq., Prestbury, Macclesfield, won Suttons' class; while Mr. McIndoe was easily first in the class for a collection offered by Webbs of Wordsley.

Several things tended to prevent a really magnificent show of Roses, of which the chief was the fact that the metropolitan show of the National Rose Society opened on Hanley's second day. Several of the leading growers, as a consequence of this, did not contribute at all, while those who did so had obviously kept their finest flowers for the London gathering. The finest box was in the class for twelve, distinct, which was won by Messrs. Alex. Dickson & Sons, Newtownards, co. Down. The varieties were Gustave Piganeau, A. Lindsell, Nestor, Bessie Brown, Florence Pemberton, Etienne Levet, Captain Hayward, Tom Wood, Mildred Grant, Mrs. W. J. Grant, Mamie, and Charles Lefebvre, all of which were good. Messrs. Dickson & Sons took the chief honours in the other classes. For twelve Teas and Noisettes, trebles, Messrs. J. Townsend & Son, Worcester, were first with a stand in which the best were Innocente Pirola, Maman Cochet, Ernest Metz, The Bride, Francois Kruger, and Marie Van Houtte. Messrs. J. Townsend & Son were also first for twelve blooms of one variety with Bessie Brown that were badly weathered; Messrs. Dickson & Sons were second with decidedly superior examples of Mildred Grant.

Both in the non-competitive and in the competitive sections Sweet Peas were beautifully shown. Mr. W. Jones, Market Drayton, had some superb flowers of the best varieties, and secured two first prizes. Amongst trade growers Messrs. Hinton Bros., Warwick; Jones & Son, Shrewsbury; Henry Eckford, Wem; and Robert Sydenham, Birmingham, all showed Sweet Peas in well-nigh perfect form. Floral decorations were peculiarly excellent, the leading prizes being shared by Messrs. Jenkinson & Son, Newcastle, Staffs, and Perkins & Sons, Coventry. Both of these firms have enviable reputations for the graceful beauty of their bouquets, baskets, and epergnes, and they easily maintained it on this occasion.

Financially the chief class in the schedule was for a group of plants arranged for effect down the centre of the tent in a space not exceeding 300 square feet, for which £70 were offered in four prizes. Mr. Jas. Cypher, Cheltenham, was a splendid first with an attractive arrangement of grandly grown plants. The centre was formed of a lofty mound, from which rose a handsome Kentia, while at each corner were smaller mounds with graceful slender growing Bamboos. The flowering plants utilised were Swainsonias, Liliums, Fuhsias, Ericas, Humera elegans, Ixoras, Cattleyas, and Odontoglossums. Foliage plants comprised Aralias, Caladins, Ferns, Palms, Bamboos, Asparagus, and Crotons. Mr. W. Vause, Leamington, was second with a very fine group of plants, consisting in the main of similar kinds to those in Mr. Cypher's group. Mr. J. Read was third, and Mr. Chas. Roberts, Oswestry, fourth, but neither of these was of any special merit. Mr. J. Cypher also annexed the premier place in the class for a group of Orchids, in which he staged many magnificent plants.

In the class for twelve specimen plants, six in flower, Mr. J. Cypher was first with noble examples of Croton Queen Victoria, C. Mortfontainensis, Kentia Belmoreana, K. Forsteriana, Latania borbonica, Eriola Cavendishiana, E. ventricosa Bothwelliana, Statice profusa,

Ixora salicifolia, *Bougainvillea glabra*, and *Phœnocomma prolifera* Barnesi. Mr. W. Vause was second. These positions were maintained in the class for six Palms, where both growers were in splendid form. Mr. Cypher sent *Kentia Belmoreana*, *Phoenix rupicola*, *Latania borbonica*, *Thrinax elegans*, and two others. Mr. Cypher continued in the van in the class for eight Orchids in bloom, distinct, with perfect plants of *Cattleya gigas*, *C. Mossiæ*, *Epidendrum prismatocarpum*, *Brassavola Digbyana*, *Odontoglossum crispum*, *O. Coradinei*, *Cypripedium Lawrenceanum*, and *C. superbiens*. Messrs. Jenkinson & Son were second with a much poorer set.

Messrs. J. Veitch & Sons, Royal Exotic Nursery, Chelsea, arranged a splendid group of plants, not for competition; this was one of the features of the show. Messrs. J. Peed & Sons, Norwood, and W. Hartland & Sons, Cork, both showed tuberous-rooted Begonias, the former in pots and the latter as cut flowers. Messrs. Harkness & Son, Bedale; Dicksons, Ltd., Chester, and E. Webb & Sons, all staged miscellaneous flowers; while Messrs. H. Low & Co., Bush Hill Park Nurseries, had *Schizanthus wisetonensis* as well as general plants. Messrs. Patterson & Son had a fine collection of *Violas*.

Ipswich Rose, July 3rd.

This show was held as usual in the upper arboretum, in four tents joined together in the form of a cross. The day was fine, following steady rain on the previous afternoon, and the attendance good. Competition in Roses was not strong, the nurserymen being weakened by having to cut for the National Rose Society's event that evening, and the ranks of East Anglian amateurs have been sadly thinned of late years. Roses were of poor quality, H.P.'s being generally weaker than they have been for many years.

In thirty-six, Messrs. B. R. Cant & Sons were first, their best blooms being *Horace Vernet* and *Souvenir de S. A. Prince*; Messrs. Prior and Son second, with a good *Bessie Brown*, and Messrs. R. S. Notcutt of Woodbridge and Ipswich third. The same order was observed in twelve Teas, *Madame Cusin*, *Innocente Pirola*, and *Muriel Grahame* being good in the first prize stand. The two Colchester growers kept the same positions in twelve trebles, but in six similar H.P.'s Messrs. B. R. Cant & Sons were first with *Mrs. W. J. Grant*; Mr. R. C. Notcutt second with *Kaiserin A. Victoria*; and Messrs. D. Prior & Sons third with *Gustave Piganeau*. In six similar Teas, Messrs. Prior were first with *Maman Cochet*, and Messrs. B. R. Cant & Sons second with *Muriel Grahame*. Mr. Notcutt alone showed garden Roses.

In the amateur classes Rev. A. Foster-Melliar was first for twenty-four, twelve, six trebles, and twelve Teas, followed in each case by Rev. H. A. Berners. The best flowers shown in the winning stands were *Bessie Brown*, *Her Majesty*, *Mrs. John Laing*, *Maman Cochet*, *Bridesmaid*, and *Mrs. E. Mawley*, which last Rose was selected by the judges as the best bloom in the amateur classes for the medal offered by the Chemical Union. In the classes for six similar Roses—always an interesting section, as showing what varieties happen to be "coming good," and which are most approved—Rev. Foster-Melliar was first with *La France*, Mr. Parsons second with *Mrs. W. J. Grant*, and Mr. Lowther third with *Marquise Litta* (all H.T.'s; H.P.'s were out of it). In six similar Teas, Rev. Foster-Melliar was first with six grand *Maréchal Niels*; Rev. Berners second with very good *Medea*; and Mr. F. Corder third, also with *Medea* (all hot-weather varieties again). The decorative classes were well filled, but the judging could hardly be said—to use parliamentary language—to be of a non-controversial nature.

Norwich Rose, July 4th.

The writer has plenty to say, but nothing to print, on the subject of the Norwich day being appropriated by the N.R.S., beyond his belief that the first Thursday in July has been the Norwich day for nearly three-quarters of a century. The show was held in the grounds of E. T. Boardman, Esq., not far from the Victoria Station.

The only professional Rose-grower to put in an appearance was the representative of Messrs. G. & W. H. Burch of Peterborough, and H.P. Roses throughout the show were worse than ever. Messrs. Burch were naturally first for forty-eight, and Miss Penrice second. No comment is necessary in this class nor in that for eighteen trebles, in which the same firm were the winners. In the remaining open class, eighteen Teas, Rev. A. Foster-Melliar was very easily first with a too crowded box of very large Teas; *White Maman Cochet*, *Muriel Grahame*, and *Maréchal Niel* were perhaps the best, the presence of *Princess Beatrice* and *La Boule d'Or* testifying to a hot, dry season. Messrs. Burch were second with flowers of considerably less than half the size, and Rev. A. L. Fellowes third.

In the amateur classes, the absence of professional judges (who are generally available and give full satisfaction) left a mark here and there, but it could not be helped, and perhaps no great harm was done. For the principal prize (thirty-six) Rev. A. L. Fellowes was first, and Rev. Foster-Melliar (am I not generally impartial?) we will say an exceedingly close second. I believe I am right in saying the stands were not "pointed;" there was not a good H.P. in either of them. Mr. Fellowes had a good *Muriel Grahame*, and Mr. Foster-Melliar a grand *Bessie Brown*, which took the N.R.S. medal as best H.P. or H.T., and a very good *Maréchal Niel*.

For twenty-four Roses Mr. T. C. Blofeld won the cup, open to Norfolk,

for the third year in succession, it thus becoming his property. Mr. B. E. Fletcher was second, and Mr. Boardman third. In eighteen, Mr. H. A. Berners first, Hon. C. A. Fellowes second, and Mr. Fletcher third; Mr. Berners being first also for twelve. None of the flowers here were good, or called for comment. For twelve Teas, Rev. Foster-Melliar was first with large blooms, but none were perhaps quite perfect; Rev. A. L. Fellowes second, and Mr. Berners third. In six similar H.P.'s Mr. Foster-Melliar was first with *Bessie Brown*, all perfect; indeed, it seems quite the exception when this grand show Rose comes divided or malformed in any way. Mr. A. L. Fellowes second with *La France*, from his bed of 1200 plants; and Mr. C. E. Owels third with *Her Majesty*. In six similar Teas Mr. Foster-Melliar was first with *Maréchal Niel*, better even than at Ipswich; Hon. C. A. Fellowes second with *Maman Cochet*, rather rough; and Mr. Berners third with *Medea*, not quite as good as at Ipswich. In twelve Teas of a sort Mr. Hammond, of Eye, was first with *Maman Cochet*, one of which had the medal as best Tea; Mr. A. L. Fellowes second with *White Maman Cochet*; and Mr. Blofeld third with *Souvenir d'un Ami*.

Of other exhibits in the show none struck me more than some splendid *Nymphæas* shown by Dr. Beverley of Brundall. They were quite the finest blooms I have yet seen, *Laydekeri purpurata* being nearly double the size of mine, and quite distinct. In these flowers, as in Roses, one is apt to think a variety not distinct when only weak specimens can be compared. *M. chromatella* and *O. sulphurea*, quite good yellows, and *M. rosea*, very large, much more distinct from *M. carnea* than I can get it. *O. exquisita*, with me most delicate, and "gone home," enormous and splendid. *Zanzibarensis azurea* he also showed a tiny bloom of, but I doubt its hardness.

In the grounds were the tallest Tulip Tree I have yet seen (quite of "forest" height) in bloom, and a grand old specimen of the Snowdrop Tree (*Halesia tetraptera*) very large, and with great old limbs lying on the ground, like a gigantic old Mulberry.—W. R. RAILLUM.

Harrow Horticultural, July 9th.

Under the management of an enthusiastic band of business gentlemen resident in Harrow, this summer exhibition has become a very successful function. There is an entire absence of that wrangling and jealousy which is the ruin of many similar shows. Though only a small exhibition, there is generally a gate-taking of £50, and probably a good deal more could be secured were the show more liberally advertised locally. The secretary, Mr. Lewis Pawle, and the president, Rev. F. Wayland Joyce, M.A., exercise a capital influence, and to them and their immediate helpers the success of the event is largely due. Splendid weather favoured the exhibition, which was held in the beautiful grounds of Dudley Lodge, by kind permission of J. Macandrew, Esq., where the Rambler Roses and other hardy flowers blossom in grand style. The trade exhibits form a very special feature of the show, many of the firms from fifty miles around showing at this meeting. The ladies' classes for decorative entries occupy a whole marquee to themselves, and throughout all the show the taste displayed in arrangement was specially noticeable. A pleasant luncheon was provided at one o'clock. Music in the afternoon formed an additional attraction to the flower show.

Open Rose Classes.—Messrs. B. R. Cant & Sons, Colchester, set up the first prize collection in the class for thirty-six, distinct, having very fine blooms, though all of moderate size. We can only select the best, which, to our mind, were A. K. Williams, Alfred Colomb, *White Maman Cochet*, *Marie Verdier*, Earl of Dufferin, Seedling H.P. Ben Cant, a most brilliant crimson variety; Mrs. W. J. Grant, *Comte de Raimband*, *Suzanne Marie Rodocanachi*, beautiful; and nicely formed blooms of *Horace Vernet*, *Madame Crapelet*, and *Chas. Lefebvre*. Messrs. F. Cant & Co., Colchester, were a fair second, having grand blooms of *Comtesse of Londonderry*, *Maman Cochet*, *Fisher Holmes*, *Duke of Teck*, *Prince Arthur*, *Capt. Hayward*, and *The Bride*. Messrs. Paul & Son, The Old Nurseries, Cheshunt, were third. Four entered.

For twelve distinct Teas or Noisette Roses, Messrs. F. Cant & Co. led with wonderfully sweet blooms. Their hack row of *Maman Cochet*, *White Maman Cochet*, *Mrs. Ed. Mawley*, and *Madame Cusin*, Ernest Metz was another good sample in this stand. Messrs. R. B. Cant & Sons second, and Messrs. D. Prior & Sons third.

There were three magnificent entries for twelve distinct bunches of garden Roses, and these themselves formed a splendid feature. Mr. Charles Turner of Slough here "pulled off" the first award with a massively set stand. He staged *Angustine Guinoisseau*, *Madame Charles*, *Papa Gontier*, *Alister Stella Gray*, *Madame Falcot*, *Marquis of Salisbury*, W. A. Richardson, *Madame Ahel Chatenay*, and others. Messrs. Geo. Paul & Son, Cheshunt, as second, had *Lady Battersea*, *Madame Jules Grolez*, *Gruss au Teplitz*, *Madame Pernet Ducher*, and *Incida plena*. Messrs. F. Cant & Co. were third.

Medal Roses.—The National Rose Society's silver-gilt medal (given by Dr. A. H. Williams), awarded for the best Rose in the show, went to Mr. C. Turner with a *Horace Vernet* bloom, not very large, but grand otherwise. The silver medal for the best Rose in the open amateurs' classes was won by Mr. C. J. Salter with a good sample of *Bessie Brown*. The bronze medal in the members' class was taken by Mr. W. Head, gardener to G. A. Davis, Esq., with a fair specimen of *White Maman Cochet*.

Amateurs' Open Classes.—In the amateurs' section Roses were exceedingly good, being clean in colour, bright, and of fair good form and size. For two dozen blooms in class 4 the first award fell to Mr. C. J. Salter, gardener to Mrs. Haywood, of Reigate, who staged a remarkably even set. His best blooms were those of Her Majesty, Caroline Testout, Madame G. Luizet (which was A1), a splendid Bessie Brown and one of the finest samples of Xavier Olibo we have ever seen. What a pity this Rose grows so poorly. There were other two entries, and both obtained equal second prize; no third. The winners were Mr. Ed. Mawley, of Berkhamstead, and Mr. R. West, of Reigate. Mr. Mawley's Merveille de Lyon was sweet, though small, and his Alfred Colomb, White Maman Cochet, and Mrs. Ed. Mawley were each good blooms, while in Mr. West's stand the best finished samples were Duke of Edinburgh, Madame V. Verdier, Louis Van Houtte, La France de '89, and Baroness Rothschild. All the boxes were highly creditable.

It shows the keenness of the competition in class 5, when we state that ten entered. Mr. Lewis S. Pawle led off with good even blooms, including the new Rose Tennyson, and other fine flowers of Sir Rowland Hill, Dupuy Jamain, magnificent; Marie Van Houtte, Mrs. S. Crawford, Caroline Testout, Louis Van Houtte, Comtesse de Ludre (H.T.), Helen Keller, Capt. Christy, Heinrich Schultheis, Marie Baumann. This was by far the best staged exhibit, and when one knows that "every little helps" in such competitions, other exhibitors might in future take the hint. It won Dr. Williams' prize in its section, awarded for tasteful staging. Mr. T. Norman, gardener to Mrs. Charles, came second with neat though undersized blooms, including La France, Innocente Pirola, Marie Van Houtte, and Her Majesty. The third prize was captured by Mr. Frank Spencer, whose stand was strong in good Teas.

Rev. E. C. E. Owen had the only entry in class 6; but for half a dozen distinct blooms the competition was sharp. Here Dr. Williams was placed in the forefront with Mrs. J. Laing as his finest bloom. Mr. E. W. Howson and Mrs. G. Middleton followed in this order. Five entered. Some good little blooms were shown in the cottagers' Rose section, the principal winners being Dr. Williams, Mr. L. Pawle, Mr. A. L. Hargreaves, Mr. F. Spencer, Mr. J. R. Cator, Mr. G. A. Holme, Mr. G. Allen, Mr. A. J. Hill, Mr. J. A. Atkins, and Mr. Chas. Green.

Groups.—The first prize for a group of plants arranged for effect was awarded to Mr. J. T. Norman, gardener to Mrs. Charles, whose plants, and tasteful arranging of them, left nothing to be desired. In class 17, for a smaller group of plants, Mr. Wm. Smith, gardener to L. Gardener, Esq., beat Mr. J. Rayner, gardener to W. L. Calkin, Esq., both with nice plants, but too crowdedly put together. The classes for plants were all very creditable, and fairly well filled.

Cut Flowers.—The cut flower competition naturally formed an extensive display, and we must write in praise of the general good taste displayed in the staging of them all. The quality was fresh and excellent, which says well for the purity of the Harrow atmosphere. A. L. Hargreaves, Esq., won first for a collection of cut flowers, twenty-four bunches, including Irises, Gaillardias, Lilliums, Delphiniums, Phloxes, and Campanulas. Mr. Lewis S. Pawle led for twelve bunches with select and beautifully arranged vases of Schizanthus, Sweet Peas, Erigerons, &c.

Fruit.—In class 32, for one dish each of three kinds, Mr. W. Head was first with beautiful Strawberries, White Currants, and Raspberries; Mr. J. Rayner second, and Rev. E. Owen third. For one dish each of Red, White, and Black Currants the same order was followed; while for one dish of Strawberries Mr. W. Head led; second, no name; and Mr. L. S. Pawle third.

Vegetables.—For a collection of six kinds of vegetables Mr. W. Smith beat Mr. W. Head. For a collection of four kinds Mr. E. W. Howson was first, Mr. J. Rayner second, and Dr. Williams third.

Decorative.—The ladies' classes, as we have said, were well patronised, and all of a high order of merit. Some very skilful arrangements were staged. Miss M. Holmes took the premier award in class 119 for the best decorated dinner table, she having a sweet and uncommon arrangement of white Sweet Peas and blue Campanula turbinata, with trails of Smilax. Miss Ella Brown was first for an arrangement for the centre of a dinner table, and Mrs. G. A. Holmes second.

Miscellaneous Exhibits.—Messrs. Barr & Sons, King Street, Covent Garden, had hybrid Delphiniums, displaying more colour and variety than we have hitherto seen. Gladiolus, Coreopsis, Lychnis chalcedonica, Centaureas, &c., were included. They also staged a few pigmy trees. Messrs. Paul & Son, The Old Nurseries, Cheshunt, had a choice exhibit of hardy out flowers of a showy character for gardens. Galega compacta alba and Morina longifolia are two useful plants in this direction. Mr. J. Russell of Richmond staged a group of choice shrubs, including the golden cut-leaved Elder, Acers, Arundinaria Fortunei variegata, and Azara microphylla; beautiful and well grown Crotons of elegant proportions, suitable for dinner table decoration; they also had a number of Carnations, and two bushy pot Vines. Hardy plants from Winchmore Hill were also forward in considerable quantity, the most beautiful amongst those least known being Statice incana, Gentiana Kesselringi, Lychnis atosanguinea, Oatrowskia magnifica, and Delphinium chinensis. He also staged fruits of the Loganberry. Messrs. G. & A. Clark, The Nurseries, Dover, sent fresh and splendid bunches of Crimson Rambler Rose, Erigerons, Carnations, Irises, Delphiniums, and other hardy flowers. Samples of agricultural and horticultural fertilisers formed an interesting exhibit from Messrs. J. W.

Foster & Co., Limited, Greenford Green, Harrow. A strong display of Lilies and other hardy flowers were well arranged by Messrs. Wallace and Co. of Colchester. His varieties of Liliun Thunbergianum, Liliun Browni, and L. auratum Wittei were very handsome.

Wolverhampton, July 9th, 10th, 11th.

The thirteenth annual exhibition was held as usual in the charming and well kept West Park, and opened under the most auspicious circumstances as regards the typical summer weather. The park itself, than which no better a venue could be desired for a flower show, was in the very pink of condition, the verdant lawns being dressed in their brightest sheen, while the numerous flower beds were gay with their brilliant treasures in all their freshest hues. As already stated the present show is the thirteenth of its kind in Wolverhampton, and its history has been practically one of unbroken success, until it promises to equal its earlier rivals. The show was held under the presidency of the Mayor of Wolverhampton (Councillor E. Walton Hamp), and the arrangements most efficiently carried out by the courteous and energetic secretary (Mr. W. J. Barnett) and his efficient committee. Good as the Wolverhampton shows have ever proved, it may safely be said that none have eclipsed if even equalled, both in extent and quality of the exhibits, that of the present one. Every section of the show was well filled, and in the majority of the classes the competition was keen.

The rivalry in the groups of plants arranged for effect, though not numerically strong, was characterised by the great taste displayed, especially in the first and second prize groups; and, as usual, the name of that veteran exhibitor, Cypher, was to be observed on the premier prize card attached to one of his well-known artistic arrangements, each, however, differing more or less from its predecessors. The first prize was readily accorded to this exhibit, and the second honours fell to Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, Birmingham, for a most creditable composition, little inferior to that of his redoubtable rival, and certainly eclipsed any of his previous efforts. The third position was accorded to Mr. W. Vause, Leamington, for a comparatively heavy arrangement, though rich in quality of material. In the class for gentlemen's gardeners and amateurs, Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston, was placed first with a tastefully arranged group; and Mr. R. Sharpe, gardener to H. Lovatt, Esq., second, with also a most creditable display.

Stove and greenhouse plants were well shown by Mr. Cypher with his usual complement of monster specimens, and amongst which such as Bougainvillea glabra, Erica ventricosa Bothwelliana, Ixora Williamsi, and Clerodendron Balfouri were conspicuous, Mr. W. Vause occupying the second position with very creditable specimens. Mr. Finch of Coventry also exhibited several well grown specimens. The competition in the various exhibits of groups and collections in the competitive and non-competitive classes was very keen.

The display of All-England Roses hitherto has been one of the main features of the floral exhibits of the Wolverhampton shows, and on no previous occasion have they been more numerous represented, nor more keenly contested as regards quality, an additional feature being the bunches of Roses shown with foliage and buds as cut from the plants. In the class for seventy-two cut Roses (of which there was not a single entrant last year), Messrs. B. R. Cant & Sons were adjudged first honours with a superb lot, and in which a bloom of their new Rose, Ben Cant, was the centre of attraction. The second prize was well secured by Messrs. A. Dickson & Sons, Belfast, the third by Messrs. Harkness & Sons, Hitchin, and the fourth by King's Acre Nurseries, Hereford. For forty-eight varieties, Messrs. Harkness were to the fore, closely followed by Messrs. A. Dickson, Messrs. J. Townsend and Sons, Worcester, and Messrs. B. R. Cant. For eight varieties, Messrs. A. Dickson, B. R. Cant, and Messrs. Perkins & Sons, Coventry, were placed as in order named.

For twelve bunches of Roses Mr. John Mattock, Oxford, was placed first with a beautifully arranged collection; the second prize to Messrs. Harkness, and the third to Messrs. Jenner & Sons, Olton. For twenty-four varieties, Mr. Hugh Dickson, Belfast, was placed first for a fresh and bright lot; second, Messrs. Townsend; and third, Messrs. Perkins. For twelve blooms, dark varieties, Mr. B. R. Cant, Messrs. D. & W. Croll, Dundee, and Mr. J. Townsend were the respective prizetakers. For twelve blooms, light varieties, Messrs. Perkins, Hugh Dickson, and A. Dickson & Sons were placed as named. For twelve new varieties of 1898, 1899, and 1900, first prize (a gold medal value £3 and £2 cash) was awarded to Messrs. A. Dickson, the second to Messrs. Perkins, and the third prize to Mr. B. R. Cant. Tea Roses were finely shown by Messrs. A. Dickson, John Mattock, D. & W. Croll, and Townsend & Sons.

Sweet Peas were an exceedingly attractive feature, which was enhanced by the superb collection from Wem, presided over by the veteran Sweet Pea genius himself (Mr. Henry Eckford). Hardy herbaceous and other cut flowers were magnificently represented both in the competitive and non-competitive classes, and the ladies' dinner-table floral decorations were unusually good.

Fruits were very well exhibited by several of the leading growers, especially in collections, and in which latter the names of Messrs. Goodacre, Bannerman, and Read were conspicuous. Vegetables were remarkably well shown by several exhibitors, and a most attractive feature was the extensive and classically arranged collections of wild flowers.—W. G.

Royal Horticultural of Ireland.

The annual Rose function of the above society was held on Tuesday last, the 2nd inst. Although the prior days were really unpleasant, the fixture was fortunate in having a very pleasant day with absence of rain, although an occasional cloud crept forth to suggest it, otherwise it was a brilliant function; the attendance was good, whilst the exhibits from the competitive classes were in considerable increase over former years. This was especially true in the classes adjudged for Roses, which formed a brilliant show. However, the weather of June told heavily on several exhibitors, whose boxes, though good in some points, were weak. Fruit was likewise back, especially Grapes. Sweet Peas and Begonias were not much in evidence, but hardy flowers were well staged; this is a welcome feature, as these classes are generally weak. During the afternoon the Viennese Band discoursed a varied selection of music in a faultless manner. The task of judging was entrusted to the following:—In the Roses Mr. W. J. Grant, Cardiff, had an arduous task, and his judging met with unanimous approval, as did that of Messrs. F. W. Moore and Thomas Goff in the other classes. Among plants and fruit the judging of Messrs. Dick and E. Knowlton gave the greatest satisfaction.

For a stand of thirty-six Roses, in twenty-four varieties, not more than two any variety, for the Dickson's challenge plate, value £25 (it goes to England this time), Mr. Grant, gardener to F. W. Tattersall, Esq., Crookleigh, Morecambe, staged a superb stand of thirty-six faultless blooms, amongst which Ulrich Brunner, Marchioness of Lonsdale, Mrs. S. Crawford, Mrs. W. J. Grant, Madame C. Remy, Bessie Brown, A. K. Williams, Duchesse de Morney, and Gustave Piganeau stood out prominently. The second place was taken by F. W. Miller, Esq., Windsor House, Monkstown (gardener, Mr. D. Colohan), a former prizewinner for two successive years, with choice blooms of Souvenir d'un Ami, Rubens, Madame Hoste, and A. K. Williams. Lord Ashtown, Woodlawn, co. Galway (gardener, Mr. Porter), came a good third. For a stand of twenty-four blooms, in at least eighteen varieties, J. Campbell Hall, Esq., Rowantree House, co. Monaghan, was first with choice blooms of White Maman Cochet, Marquise Litta, Mrs. Ed. Mawley, Mrs. W. J. Grant, Ulster was especially good. Second place went to F. Tattersall, Esq., Crookleigh, Morecambe (gardener, Mr. Grant). The latter likewise took the premier place for twelve blooms in four varieties, each variety to be staged triangularly; prizes given by Charles R. Douglas, Esq.

In the Tea and Noisette classes Mr. Grant again took premier place for the West challenge cup with eighteen blooms in twelve varieties, amongst which Cleopatra, Innocente Pirola, and Ernest Metz were faultless blooms. Ernest Bewley, Esq., came second with choice blooms of Bride, Madame Hoste, and Mrs. Ed. Mawley. Mr. Grant also took first for the stand of twelve blooms in six varieties; Ed. D'Olier, Esq., Knocklinn, Bray (gardener, Mr. Harvey), being second. In the classes devoted to exhibitors who have never won show honours, in the class of twelve in at least eight varieties, Cecil Burroughes, Roche, Esq., Giltown, co. Kildare (gardener, Mr. Tyndall), was first with an even box. In the class for six blooms, at least four varieties (in the two last classes the prizes were given by Ernest Bewley, Esq.), H. J. R. Diggles, Esq., was first. La France was capably shown by J. Hume Dudgeon, Esq., Merville, Booterstown (gardener, Mr. D. O'Leary), who took an easy first. For six blooms of dark Roses Capt. Maunsell, co. Kildare (gardener, Mr. Ahern), was first.

Carnations can truly be said to have been a feature, Mr. W. J. Mitchison, gardener to Colonel Crichton, Mullaboden, co. Kildare, was an easy first in all classes; the blooms were symmetrical, well built flowers of great depth and size. The following varieties were by far the best blooms, Duchesse de Consuelo, Loveliness, Lady Milbank, Ellen Terry, Lady Ardilaun, and Voltaire. The following classes took first for twelve singles, also twenty-four bunches for a challenge plate, also the Watson challenge cup, whilst the Malmaisons staged by him was allotted first. Mr. Rigg, gardener to Lord Cloncurry, Lyons, co. Kildare, was second in the above classes with fine flowers.

Hardy cut flowers were shown with telling effect by Lord Ashtown, Woodlawn, co. Galway (gardener, Mr. Porter). He was an easy first for the Domville challenge cup for a stand of twenty-four cut blooms in at least eighteen distinct varieties. He likewise took the Kelway silver-gilt medal for a collection of forty vases of hardy flowers, bulbous types being excluded.

Mr. Byrne, gardener to D. Drimmie, Esq., Bellevue, Booterstown, again took premier place for specimen Orchid with a well-developed plant of *Oncidium sphacelatum*, also similar place for his specimen exotic *Anthurium Andreanum*, also first for twelve single Zonals. Violas were exceptionally well staged by R. T. Harris, Esq., Saintbury, Killiney, who was an easy first, blooms being well expanded. In the nurserymen's classes for Roses, Messrs. Alex. Dickson of Newtownards, Belfast, were first with a superb display, and were closely followed by Messrs. Hugh Dicksons, Belmont, Belfast, who likewise had a superb array.

Fruit, on the whole, was weak. Strawberries were coarse fruit, Cherries were good, likewise Peaches, whilst vegetables were up to the usual normal level.



Hardy Fruit Garden.

Propagating Strawberries.—The runners of Strawberries ought now to be rooted into some handy medium, by which they can be expeditiously transferred to the positions intended that the plants shall permanently occupy. Those intended for fruiting next season must be dealt with first, the best runners for this purpose being selected, and secured either upon the surface of good soil in 3-inch pots or fastened on squares of turf into which the roots can push. In both cases the soil must be kept moist, or the rooting will be very slow and the ultimate plants not so satisfactory as desirable. In continued dry weather daily watering will be necessary, but as soon as the plants are well rooted into the pots or turves detach the runner wire which connects them to the parent plant, and place the pots or turves on a moist base in a semi-shady position until the new position assigned them is ready. Runners also root readily into the soil, and there is often the difficulty of too many doing this, and a crowded condition perpetuated. This should be avoided by judicious thinning-out of at least the most crowded and undesirable. This thinning-out and removal will sooner or later have to be effected, but if it can be carried out early, so as from the first to prevent a rank condition, it will be better, and the removal of weeds easier accomplished. It is frequently desirable to afford the runners some extra assistance by introducing some mounds of good soil among them, and encouraging them to root into that material; or for later plants the soil may be forked up, cleared of strong weeds and surplus runners. This method acts very well for securing rooted runners by September, but the former methods detailed are on the whole the best for securing stock for earlier planting. It is now well understood that only runners from fruiting plants should be propagated for stock—that is, plants which have shown fruit or flower during the season. Barren plants cannot be depended upon to produce fruitful runners, hence on no account should they be trusted.

Destroying Insects.—Wall trees suffer the most from attacks of various pests which annually, in more or less force, attack the trees. Moisture at the roots, and good regular cultivation, does much to prevent the attacks assuming a virulent character. Endeavours ought each season to be made to minimise the number of insects, if not to banish them altogether. To effect this end give ample moisture to the roots, supplementing it with liquid manure; dispense with superfluous shoots by summer pruning, and lay in freely, though not overcrowding, young shoots where such are desirable. Then shorten the foreright shoots to four or six leaves. This treatment disposes of many insects and much filth. Applications of clear water well directed against the trees are beneficial, using a syringe or garden engine. In some cases this will be sufficient, but where it is not an insecticide will prove effective. For dipping the points of shoots infested with black fly a strong solution of tobacco water may be employed, or petroleum emulsion. Quassia extract, too, is excellent for generally syringing the whole of the trees, its bitter principle being very repelling to insects, while, of course, it readily kills those it touches. These latter remedies may be bought as proprietary preparations, thus rendering the home-made solutions unnecessary, while they are quite if not more effective, especially if used according to the directions. On trees where red spider is prevalent the solutions used should be well directed to the under sides of the leaves. American blight is a very conspicuous object now on Apple trees that may be more or less infested by it. This is one of the best seasons to make a strong effort to eradicate it, though it can seldom be done without persistently persevering over several seasons, a thorough winter dressing also being essential. The best and safest application for the present time is to work well into the infested parts, with a painter's brush, a dressing of methylated spirits of wine.

Morello Cherries on Walls.—Good healthy trees on walls and fences are very attractive when laden with plenty of fruit, and the growth is in a healthy condition. The current season's shoots require to be thinned out, regulated, and trained in. This will give the trees a neat and well cultivated appearance, and enable the wood to ripen thoroughly, while the fruit can be more readily netted over to prevent birds attacking it. Young shoots not wanted for training-in may be shortened back to the third leaf, when they will form fruit buds at the base. Well ripened growths left at full length produce the best.

Mulching.—After all wall trees and others growing in the driest positions have been thoroughly moistened at the roots, a liberal mulching of manure will conserve it, and render water less necessary in the immediate future. Liquid manure may be given over the mulching, where such support is necessary, to increase the size of the fruit. Young trees need a considerable amount of attention in watering and mulching, so as to encourage the proper production of young wood, but liquid manure ought not to be given them. Raspberries may be mulched with rich farmyard manure, and watered liberally. First reduce the number of suckers.—SURREY.

Fruit Forcing.

Peaches and Nectarines.—Early Houses.—The trees having been cleared of the fruit, cut away the wood on which it has been produced to the successional shoot at the base, and stop growths making more than 12 to 15 inches of growth required for bearing next year, always excepting extensions, which may be allowed to grow where there is room. Pinch the laterals at the first leaf and to subsequent as made, thinning where crowded. Maintain a proper condition of moisture on the outside as well as inside borders.

Succession Houses.—Where the fruit is ripening, syringing over the foliage must cease, air being given day and night so as to prevent moisture being condensed on the fruit, and thus inducing "spot" to affect and spoil the finest specimens. Moderate air moisture, however, should be secured by damping the paths and borders in the morning and afternoon, not neglecting to afford due supplies of water at the roots, with light mulchings, especially on light soils.

Where the fruit is swelling, syringe morning and afternoon, not allowing red spider to get the least footing, or it will increase, to the prejudice of the current and succeeding crop. Expose the fruit to the light by drawing the leaves aside, shortening them, or raising on laths, with the apex to the sun. Keep the growths fairly thin and tied down, not too tightly, as they advance, stopping next year's bearing shoots at about 14 inches, if they exceed that length, and pinching the laterals to one leaf as made. Extensions may be trained in full length as space permits, but avoid crowding, and maintain, as far as possible, an even growth throughout the tree. Afford liquid manure, or top-dressings of fertilisers, after making the border moist, and wash in moderately to weakly trees, not neglecting the watering. A little air constantly will do much to prevent scorching, and the enlarging of the openings in the morning early will secure a long day's work of elaboration, always provided the temperature be not lowered, but advances with the sun heat.

Late Houses.—It is only possible to have fruit very late by keeping the house as cool as possible during the hot summer months, ventilating day and night, but not in windy weather, this causing the current to rush through the structure and dry the atmosphere excessively. Nothing is gained by that, but often a rich harvest of battered leaves and a plentiful crop of red spider. This pest must be laid low by forcibly syringing in the morning and late afternoon, the trees also having plenty of water and nourishment at the roots, with mulchings of partially decayed manure in a lumpy state, and trees kept moist will keep the roots near the surface. Avoid, however, heavy mulching, about an inch thickness sufficing, adding to it from time to time. Do not allow too many fruits to remain for the crop, but thin them betimes, leaving about a fruit to each square foot of trellis covered by the trees.
—ST. ALBANS.

Phenological Observations.

JULY 12TH TO 18TH.

PLANTS DEDICATED TO EACH DAY.

12 Fri.	Magpie moth seen.	Great Snapdragon.
13 Sat.	Brambles all in blossom.	Blue Lupine.
14 Sun.	Drinker moth seen.	Everlasting Lupine.
15 Mon.	St. Swithin's Day.	Small Cape Marigold.
16 Tu.	Blackbird's song ceases.	Large garden Convolvulus.
17 Wed.	Burnished-brass moth seen.	Sweet Pea.
18 Thr.	Whitethroat's song ceases.	Autumn Marigold.

Next Week's Events.

We request our readers' co-operation in furnishing as many useful notices as possible.

Friday, July 12th.—Brentwood Exhibition.

Saturday, July 13th.—Manchester Rose Exhibition.

Tuesday, July 16th.—Royal Horticultural Society Exhibition and Conference on Lilies at Chiswick (two days); Kidderminster Exhibition.

Wednesday, July 17th.—N.R.S., Ulverston (North Lonsdale Rose Show); Ancient Society of York Florists' Summer Show; Cardiff and County Horticultural Show (two days); Reigate (Redhill) Rose Show; Ore (Sussex) Flower Show.

Thursday, July 18th.—Hoddesdon Exhibition; Royal Botanical Society meeting; Halifax Exhibition; Prescott and District Horticultural Show.

Trade Catalogues Received.

Geo. Bunyard & Co., The Royal Nurseries, Maidstone.—*Descriptive List of Strawberries, Summer Fruits, Grapes, Figs, Dutch Bulbs, and Carnations.*

Potash Syndicate, 110, Strand.—*Potash Salts, their production and use.*



TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Tomatoes Diseased (Perplexed).—They are affected with sleeping disease fungus. See article on page 5, July 4th (last week's issue).

Diseased Tomatoes (H. B., Chester).—Your plants are affected by the sleeping disease fungus. You will find a full description of the fungus, its growth and characteristics, together with remedial or, rather, preventive measures on page 5, of last week's issue.

Galla Elliottiana (W. R. R.).—Seedlings of this plant are very variable, and no doubt, though the leaves are green as yet, the better matured ones will assume the speckled appearance. Seedlings take two years or three to reach flowering size. The question is, Would you not have been better to buy a plant to begin with? The first leaves are generally green.

Diseased Tomato Plants (X. Z.).—Your plants were examined and reported on in the *Journal of Horticulture*, July 4th, page 5, your letter having gone astray. With this before us we consider the partial changing of the soil every year would leave some of the resting spores of the sleeping disease fungus in the old soil, and thus the disease pass over the winter to infect the following season's plants. It is noteworthy that the plants in pots have escaped the disease to a great extent, and one of the largest growers of Tomatoes in the Lea valley grows his Tomato plants in pots, and thus insures the greatest immunity from the "sleeping" disease. This course we advise in your case, or if you still pursue the planting out system, take the preventive measures suggested on page 5 and further referred to in to-day's issue in reply to "Perplexed."

Diseased Twig of Peach Tree (Ignorant).—The leaves swarm with what is called red spider, but which is not a spider, but a mite, Tetranychus telarius, one of the most pernicious pests affecting Peach trees, it sucking out the juices and causing the premature falling of the foliage, greatly weakening the tree and prejudicing the succeeding season's growth and crop. It should be destroyed by syringing with paraffin emulsion, $\frac{1}{2}$ lb. to 4 gallons of soft water, adding 1 oz. sulphide of potassium or liver of sulphur to 4 gallons of the forenamed wash. It is advisable to dissolve the paraffin emulsion, commonly called petroleum softsoap, in a gallon of hot water, and the sulphide in a quart of hot water, adding together, and then making up to 4 gallons with hot water, and using when cool enough (90° to 100°). The general treatment of Peaches is given in our "Work for the Week" column under "Fruit Forcing" from time to time. The dying off of the branches is probably due to gummosis, stout branches being most frequently attacked; the disease is indicated by the appearance of tear-like drops of almost colourless gum oozing from the branches. Diseased branches should be removed to sound parts below the point of infection. Lifting the trees is the best means to promote a healthier condition.

Market Growers' Treatment of Vines (R. C.).—Grape Vines forced hard, so as to have the fruit ripe or ripening in April or early in May, are liable to fail after two or three seasons' forcing, and as a matter of fact it pays well to take one heavy crop only, and then destroy the Vines, following these closely with Tomatoes, Melons, or Cucumbers. If they are kept two or three seasons the laterals should not be severely shortened at pruning time, the long rod system—that is to say, laying in new rods each season, to take the place of the old ones cut out directly the bunches are removed—answering well. As these Vines are usually fruited in small span-roofed houses, clearing out old borders and forming new ones is not a great undertaking. Grape Vines can be, and frequently are, struck and grown to a fruiting size in one season, these being capable of carrying eight to twelve bunches each; but the older plan of starting with small Vines raised a year earlier, and commonly known as "cut backs," is the most reliable and the best. Cut back in December, planted in February, and given good attention, they develop rapidly, the canes being long, strong, and early maturing. The best varieties for early forcing are Black Hamburgh, Madresfield Court, and Muscat of Alexandria; Foster's Seedling, though a good companion for Black Hamburgh in private gardens, not finding favour in the markets. Midseason and late Grapes are most extensively grown; Gros Colman among the latter being the most popular, Alicante also paying well in some instances. Not being "pushed" very hard, nor very badly overcropped, there is no fixed limit to the years the Vines remain profitable; it is all a matter of treatment.

Cycas revoluta flowering (*Ivic*).—Not an everyday occurrence, yet not particularly remarkable. In Cycadeæ the growth of the stem is not arrested by the formation of a terminal flower, as in the Angiosperms, that is, true flowering plants. Cycas are dioecious, male and female flowers occurring on different plants. In the male flowers the sporophylls (stamens) are stalked and crowded peltate scales; the female inflorescence is cone-like. You can easily distinguish them.

Celery Root-stem Diseased (*C. P.*).—The Celery is what is known as cankered, and affects the root-stem just beneath the setting on of the leaves or within the ground. It infests various umbelliferous plants, and is caused by a fungus named *Phoma sanguinolenta*. There are also traces of attack by the Carrot fly, *Psila rosæ*, which causes the well-known "rust" in Carrots. The disease is not new, though yours appears a very determined case. As regards remedy, there would not be any harm in trying the boracic acid, 1 part to 1000 parts water, which is a potential fungicide, while we advise watering with Little's soluble phenyle, 1 fluid ounce to 3 gallons of water, which will act well against the maggot, stopping the attack, and inducing a vigorous growth.

Second Spit Soil for Casing Outdoor Mushroom Beds (*G. F. O. B.*).—The second spit soil, after a year's exposure to the atmosphere in a ridge, and turning over occasionally, say every three months, outside to inside and top to bottom, would be suitable for the purpose, as it becomes ameliorated and nitrogenised. If poor, it would be advisable to add to it about a fifth part of sweetened horse droppings, heated before applying. The object is to destroy weed seeds and the spores or mycelium of fungi, and thus secure a compost for earthing the beds practically free from organic bodies of a nature calculated to interfere with the Mushroom development. Old Mushroom beds stacked for two or three years would be practically vegetable mould, and of too spongy a nature for casing Mushroom beds. The old casing material, however, could, after a year or two, be again used for the purpose. We do not consider the ground would become tainted by either the Mushroom beds or manure so as to prejudicially affect the crops of Mushrooms, though it would probably be advisable to strew the ground with salt, say 4 ozs. per square yard, some considerable time in advance of making up the beds. A little salt may be added to the manure with advantage, though kainit would be better for improving the fertilising properties of the manure.

Making Bordeaux Mixture (*G. S.*).—The 50-gallon formula is believed to give the best results. This contains:—

Water	...	...	...	...	...	50 gals.
Copper sulphate	...	...	...	...	...	6 lbs.
Unslaked lime	...	...	...	...	...	4 lbs.

In a barrel or other suitable vessel place 25 gallons of water. Tie the copper sulphate in a coarse gunny sack and suspend it just beneath the surface of the water, tying the bag to a stick laid across the top of the barrel. In another vessel slake the lime, using care in order to obtain a smooth paste, free from grit and small lumps. This is best effected by placing the lime in a pail, and adding a quart to a quart and a half of water. When the lime cracks and crumbles and the water disappears, add another quart or more, exercising care that the lime at no time gets too dry. Towards the last considerable water will be required, but, if added carefully and slowly, a perfectly smooth paste will be obtained, provided, of course, the lime is of good quality. When the lime is slaked, add sufficient water to the paste to bring the whole up to 25 gallons. When the copper sulphate is entirely dissolved and the lime is cool, pour the lime milk and copper sulphate solution slowly together into a barrel holding 50 gallons. The milk of lime should be thoroughly stirred before pouring. To complete the mixing, the liquid should receive a final stirring, for at least three minutes, with a broad wooden paddle. It is well to test the mixture before use. Two simple methods are: first, insert the blade of a penknife in the mixture, allowing it to remain for at least one minute. If metallic copper forms on the blade, or, in other words, if the polished surface of the steel assumes the colour of copper-plate, the mixture is unsafe, and more lime must be added. If, on the other hand, the blade of the knife remains unchanged, it is safe to conclude that the mixture is as perfect as it can be made. Second, pour some of the mixture into an old plate or saucer, and, while held between the eyes and the light, the breath should be gently blown upon the liquid for at least half a minute. If the mixture is properly made, a thin pellicle, looking like oil on water, will begin to form on the surface of the liquid. If no pellicle forms, more lime should be added. Air-slaked lime must not be used in the preparation of Bordeaux mixture, since it results in injury to the foliage. The Bordeaux mixture is sufficiently adhering to ordinary foliage, but in the case of smooth or waxy leaved plants its adhesive property is much increased by adding softsoap in quantity equal to the copper sulphate. The soap increases the tendency of the liquid to spread instead of forming into large drops, which roll off the surface of the leaf. It is advisable to bear in mind that the Bordeaux mixture, prepared in the proportions given, sometimes injures tender, young foliage, hence it is important to dilute the mixture for spring spraying, say, half for the earliest application, especially on young fruit, only using the full strength when the leaves are full grown. Also, remember that it is not advisable to spray Apples, Cherries, and Pears after the fruit is half grown, for otherwise the Apples, Cherries, and Pears are liable to be spoiled.

Sowing Seed of Chrysanthemum frutescens and *C. f. Etoile d'Or* (*E. T. H.*).—Yes, the seeds may be sown now in pots or pans, and placed in greenhouse or frame. When up and showing second leaves the seedlings may be pricked off in pots or pans, or potted off singly into small pots. From the pots or pans the plants can be potted into 3-inch pots, and those potted into small pots shifted into this size, and after being established in a frame they may be stood outdoors on and plunged in ashes. After treatment is simple. Place them in a greenhouse from which frost is excluded during winter. They will flower in early summer next year.

Name of Insect (*Beech*).—The caterpillar sent is that of the August Thorn moth (*Ennomos angularia*), about half grown. The group takes its popular name because the caterpillars are mostly adorned with humps or protuberances, resembling slightly the thorns of vegetable growth. You may have observed that this particular species has two small humps on the head, six along the back, and two at the tail, while a caterpillar. It feeds during June and July, the moth appears in August or later. A variety of trees and shrubs afford it food, both in gardens and the country, but it is seldom found in sufficient numbers to do harm of a serious sort to the foliage.

Coelogyne cristata (*Cam.*).—No, there is nothing unusual in *Coelogyne cristata* pushing two leads from one of the bases of the old flower spikes. It is a sign of vigour in the plant when the growths begin to push double leads, and it shows that you have been treating the plants well. It would be very interesting, and helpful to beginners in Orchid culture, if those who, like yourself, have met with a reasonable amount of success with them, would give their experiences through the medium of this column. Notes could be compared in this way by observant cultivators on small matters that are not usually touched on by writers on Orchids, and considerable benefits would accrue to the inexperienced; and in any case, when expert advice was needed, the Editor would no doubt see that it was given.

Names of Fruit (*T. F.*).—Apple Calville Rouge.

Names of Plants (*Sender of Roses*).—The red variety is Abel Carrière; the white one no one can name definitely. It is probably a variety of *Rosa alba* fl.-pl., and is found sometimes under the name of Rose Old Double White. (*L. J.*).—The Bee Orchis (*Ophrys apifera*). (*L. R. N.*).—1, *Calamintha grandiflora*; 2, *Verbascum Chaixi*; 3, *Begonia nitida*. (*St. Andrews*).—1, Common Agrimony (*Agrimonia Eupatoria*); 2, *Nepeta Mnssini*; 3, *Lythrum Salicaria*; 4, *Genista hispanica*. (*R.*).—1, *Phalænopsis amabilis*; 2, *Hoya imperialis*; 3, *Clerodendron Thompsoni*; 4, *Tecoma jasminoides*. (*N. N.*).—*Salvia virgata*. (*G.*).—1, *Achimenes* var.; 2, *Rosa polyantha* White Pet; 3, common Balm (*Melissa officinalis*); 4, *Clematis recta*.

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary*, Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary*, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary*, Mr. Brian Wynne, 8, Danes Inn, Strand, London, W.C.

Potato Spraying.—The Congested Districts Board in Ireland are evidently determined to arouse a keener interest amongst the poor farmers in the efficacy of spraying. At present the apathetic condition of those cultivators, where failure of a crop, be it rotation or otherwise, spells a dismal winter; and largely the Board are actuated by the heavy loss to the country by the absence of spraying last year. To prevent a possible recurrence for this year, the idea of issuing sprayers at a nominal figure to this class of growers is to lessen the number of infecting areas. The machines offered to the growers are the "Erin" and "Eclair" Potato spraying machines.

Publications Received.—"Le Mois Scientifique;" "Agricultural Economist," contains many delightful illustrations and articles of a highly useful nature; "Field;" "Florists' Exchange;" "The American Cultivator;" "Le Moniteur d'Horticulture;" "American Gardening;" "The American Florist;" "Gartenflora;" "Bullettino della R. Società Toscana di Orticultura;" "Tropical Agriculturist;" "Field Studies in Natural History;" "Programme of Summer Rambles, 1901, Chelmsford County Council Laboratories;" "The Best Twelve Kinds of Vegetables to Grow for Exhibition," a paper read before the Devon and Exeter Gardeners' Association by Mr. W. R. Baker; "What is a Kindergarten?" by Mr. Geo. Hanson; "The Story of Wild Flowers," by Prof. Henslow, Messrs. Geo. Newnes and Co., 1s. nett; "Report by the Principal of the School of Horticulture" (C. Bogue Luffmann), Council of Agricultural Education, Victoria; "Proceedings of the Forty-sixth Annual Meeting of the Western, New York, Horticultural Society."



Our Candid Friends.

WE have no lack of them at any rate, and though some of them may be, and are, but vain babblers, yet there are among the many those who know perfectly well of what they are talking. There are families among our great folk who have been most intimately connected with the land and agriculture for centuries. They have stuck to it through good and ill report. One of the best known names is that of the Spencers of Althorpe. As a family, they have always been closely connected with agriculture. The present bearer of the title owns somewhere about 27,200 acres in Northamptonshire. The first of the name amassed a large fortune by the breeding of sheep and cattle; indeed, he was the farming pioneer of the fifteenth and sixteenth centuries. The present earl has, during the last week in June (to be particular, 28th), opened the new Dairy School at Garforth, near Leeds, which school is to be worked in connection with the Yorkshire College and Joint Agricultural Councils of East and West Ridings of Yorkshire. We do not get a ceremony of that kind without a bit of speechifying, and the men who spoke were worth listening to. Lord Herries was the first on his legs, and he told us what, alas! we do not like to acknowledge, that we, as a nation, are very backward in regard to scientific agricultural training. Scarcely a century ago agriculture was not regarded as a science at all; it was little more than an industry, at any rate it was merely an art. Now, having become recognised as a science, it is necessary that people should know the results of the experimental researches which are being carried on, and that they should put into practice the facts which had been discovered to be the best for the production of food.

The sons of tenant farmers are availing themselves of the education now put within their reach, and the results arising therefrom will ultimately be of great benefit to the community. Lord Spencer expressed his warmest sympathy with those who are working in the cause of scientific agriculture. He says we need advanced education in order to keep pace with other nations, and to raise agriculture to its former high level of prosperity. The agricultural world needs all the knowledge it can acquire to get the most it can from the land, and from those who belong to the land. Here he hits one of the right nails fair on the head. We want the workers to be more in earnest. Half-hearted workers will not do, and they are very much to the fore at present. A man who is not interested in his work will neither do credit to himself or to it. His lordship went on to add we were so many of us satisfied if we can do as well as our ancestors, forgetting that science has opened all kinds of new doors and new ways by which things may be cheapened and improved. The experiments on the farm were better far than the printed book, that is if men would only look at them in a teachable spirit.

Now other of our friends tell us that one reason of our backwardness agriculturally is connected with our system of land tenure. We lack the security we ought to have, and it appears that in other countries where the same system of tenure prevails the same backwardness is found. Mind, there are many noble exceptions; but it does stand to reason that a man will do better for his own land than for that hired, where he is liable to capricious dismissal at any time. Old Arthur Young had a saying, "Give a man secure possession of a bleak rock, and he will turn it into a garden; give him a nine years' lease of a garden, and he will turn it into a desert."

We read again the old, old story of want of unity. Farmers are very exclusive; they hate anyone to know the extent of their business. At one time they did not want to reveal their gains; now they are ashamed to record their losses. If they would only be got to co-operate, as the Danish farmers have done over the butter question, a great step would be gained. A living writer says this: "The curse of the agricultural mind is that it will take no account of little things, an attitude which, as I suppose, is the heritage of high prices and of generations of Corn growing." Indeed, we have urged time after time the same doctrine—the value of little things. A little leak will sink a big ship, and it is the little leaks in management that do as much harm to the good ship Agriculture as the stormy winds of bad prices.

There is another question much before the public at present, and that is the labour bill. We do not mean by that the excessive cost of labour, but the inability of procuring it at all. Now we are told that this arises from our treatment of the labourer in days gone by. We underpaid him, ill housed him, treated him like a serf or rather worse, and even dictated to him that form of religion we preferred

him to adopt. This is the indictment against us to-day, but to us it seems a very unfair one. We do not for a moment hesitate to say that in all points the farm labourer has been better done by than his brother artisan of the towns. It was the custom some time ago for this country at harvest to be inundated with Irish labour, indeed many come still in great numbers to those parts of the country where Potatoes are largely grown. A good Irishman is a capital workman, and we wonder if it would be possible to make it worth their while to emigrate here rather than to America. We should get some fresh blood into the country, and the men would be better off than at home. Our cottages would be like palaces, and our wages liberality itself. We heard of Irishmen in a neighbouring parish, who last year, working by the piece at Potatoes, made 6s. 2d. per day. Can Mr. Plunkett do nothing for us? or is the Irishman immoveable? Labour in Scotland is not such a difficulty, for the men's wives are always ready to fall into line and do their share when there is a press of work. We know what will be said now. What an outcry if the women are expected to work for the farmer. We are advocating a retrograde movement! But stop a minute. There is an outcry for small holdings—who does the work there? We fancy our cavillers will find the women (when it is for themselves) work as hard as the men, and certainly far harder than any master would desire. If they cannot see it in this light, there is no use trying to argue with them.

Mr. Rider Haggard quotes one pitiful case, where a tenant gives up his farm as his last labourer has left him. He tells to-day, July 2nd, of a case of a man and his wife (who, by the way, has eight small children), who are farming alone 146 acres, of which fifty are arable. How can he do it? It is worse than Egyptian bondage. Another farmer tells how he works from 5 A.M. to 9 P.M., and complains that no man will work with him. All the men who remain in the villages prefer to work at the "great ho se," or else with the larger farmers, who are not so exacting in their demands. Lord Nelson of Trafalgar, Wiltshire, tells (in the "Nineteenth Century Magazine," July No.) his experience of small holdings. For many years back, long before Jesse Collings, he had made 3 acre holdings of grass, with half acre of arable, and a cow run on the common added. There has been no lack of tenants, and, better still, no back rents. His lordship also adds that holdings of 40 to 80 acres are eagerly taken up, and pay well. The rent of the 3 acre farms is 50s. per acre; that is a good stiff rent, and it is greatly to the tenants' credit that they are punctual in their payments. Everything nowadays seems to point to small holdings—holdings that a man and his family can work with themselves. Whether this is best for the land, or for the community generally, is an open question. It is also perfectly certain that a great part of the land in Great Britain is not, from situation or character, suitable for small holdings. If the best and most conveniently placed lands are to be cut up, who is going to undertake the remainder? especially if we are to have a scarcity of labour. We think the tables are getting very much turned, and however much the labourer may have had cause to grumble in times gone by, the farmer is now in the worse condition of the two.

Work on the Home Farm.

After a few beautifully fine days, which enabled farmers to secure a good breadth of hay, we have again had a fine rain. Under the influence of moister conditions the grain crops are improving every day, and we are confident that they will bulk up much better than they did last year. The later sown Barley is far better than at one time appeared possible, and will be better than much of the earlier sown as regards straw, if not Corn. Some of the hay was badly damaged by the wet, but it was got in good dry condition at last, and with the addition of a few layers of salt in the stack will be very useful for the cattle in winter. There is a large bulk of hay still to cut, for farmers have been hoping that the rain would add considerably to the weight of the crop. Certainly some meadows are very short.

The thinness of the Mangold plant has necessitated attempts at transplanting, and one or two of our friends are making a first attempt at the practice. They are doing the work, but are very unanimous in their lack of faith in successful results. That Mangold may be transplanted with success is certain, for in the district between Selby and York it is a common practice. A crop of Myatt Potatoes is grown and marketed early in July, Mangold is then planted on the ground, having been grown thickly on another plot for the purpose. We have seen the process carried out, and noted that some of the bulbs when moved would be as large as a cricket ball; in fact we believe the size of the plant to be a considerable element in attaining success. We believe that a strong plant would grow even on very dry soil if it were properly dug up and quickly planted again.

The greater part of the Potatoes have been earthed-up, and growers who intend to spray their crops must soon be at work. The experience of last season draws attention to the desirability of having settled weather for the operation, for the lack of success in preventing the disease was largely attributed to the occurrence of heavy thunderstorms immediately after the spraying had been done. It certainly seems reasonable to suppose that to be of the most benefit the copper solution should remain on the haulm for some time.

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Journal of Horticulture.

THURSDAY, JULY 18, 1901.

Vagaries of Variegation.



BEAUTIFUL leaved plants play such a prominent part as decorative subjects, for which an ever increasing demand obtains, that in this direction alone their merits deserve all the consideration we can give them to attain the highest

development of which they are capable; to have them, in fact, as they ought to be, and not as they often are. Variegation, it must be remarked, as more commonly understood, is applicable to a section only of ornamental foliage plants, the term being usually employed to denote variation from the normal colour; but, strictly speaking, any plant displaying a diversity of colour, such as the Marantas or Rex Begonias, may be correctly called variegated plants. Such variegation is, to more or less extent, fixed and unalterable. It is variegation without vagary, and deviations from the type are but exceptions to the rule. Not so with the class of plants prompting this brief paper, for although they may be regarded by some as amenable to the ministering hand, they are apt to spring surprises upon the horticulturist by defying all his methods and means to keep them from running back to the parental green.

You may humour or threaten the child as you will,
But the sins of the parents will cling round it still.

Two plants of *Dracaena Lindenii* under notice illustrate this admirably. Showing all the true character of this beautiful variety when purchased as small plants ten years ago, they quickly developed into handsome specimens, in which the creamy variegation was predominant. The remark of a friend upon seeing them was, "Ah! you've got the true variety;" but on seeing the same plants the following year, after the interval of their having been used as house plants, cut down and restarted, he said, "That thing's no use, you've got the bad variety," and it was not easy to convince him that he was looking at the identical specimen.

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

So it was, and so it has been. The same vagaries have continued. Sometimes the erratic pair have been good, very good; sometimes bad, and very bad; and this year they were never worse—never greener.

The subject is surrounded by mystery, hence possesses a fascination which inevitably invests the unknown and inexplicable. Such men as Mohl, Schübler, Funk, and others of high rank in the world of scientific research, have tapped Nature's laboratory to extract the secret of colouration, but tapped in vain; the secret, thus far, remains well kept. Dr. Lindley thus sums up the results of their observations and his own, "There is no subject connected with the vital phenomena of either plants or animals more unintelligible than the distribution of colour over their surface—a distribution which is evidently caused by some fixed rule . . . but concerning the primary cause of which we are as much in the dark as ever." Yet botanical research or chemical investigation in connection with it, results of which are virtually nil, need not detain. Gardeners are nothing if not practical. A dozen men will have as many theories of particular treatment in developing or retaining the true variegated character. Apart from inherent traits which are beyond control—that "fixed rule" which Nature guards so well—the apparently spasmodic action under which a plant will one year blaze out in all its glory of characteristic colouring, and perverts the next, proceeds probably from external influences as well as predisposing causes. These are so many and varied as to necessitate particular, and very often diverse treatment. It may be sunshine or shade, cold or heat, soil and situation, which are factors in the economy of colour; and what one plant fairly revels in another wholly rejects, deteriorating into mediocrity, or sinking below it into the insignificance of the commonest family type.

One keen observer says that this subject has troubled him for years; whilst others have said that they cannot be bothered with such things. "If a plant does, it does; if it don't, it don't, and that's the end of it." But, indeed, it is but the beginning, and the why or wherefore of either success or failure must ever exercise the mind of the genuine plant lover. Amongst the variegated forms of various stove and greenhouse plants which have troubled the writer are *Cyperus alternifolius*, *Alocasia macrorhiza*, some varieties of *Crotons*, and the trailing *Tradescantias*. Leaves only of the *Cyperns* were obtained this spring from a particularly good variegated form, some being pure albinos, and by all the laws of heredity they should keep so. These inserted into thumb pots are now perverted into grass green plants. Why is it so? A critic summarily disposes of the matter by saying, "it runs in the blood, same as human beings." Well! Yes; we suppose so, same as wooden legs. Some dozen plants of the *Alocasia*, the pure stock of an old exhibition plant of fine form, are labelled for future selection as "good," "very good," "bad," "very bad." The best bearing ivory-white leaves with little more than a suspicion of green; the worst showing not the faintest trace of variegation in their coarse but handsome foliage. All are growing in a light, low stove, slightly shaded on the sunny side. *Crotons* grown in an ideal position, well up to the glass without any shade, have, indeed, but few faults in their colouration beyond those vagaries from which even they are not exempt. One old plant of *Croton Junius*, some 6 feet high, was lately relegated to the rubbish heap, having this season come as green as a common Laurel without the redeeming features of that handsome hardy plant. It was an old plant which had been cut back several times, and had on various occasions been particularly well coloured; some of its progeny is at the present time in fine form. Again, a good specimen of *Croton Prince of Orange* is particularly good, some of the leaves being of an entire deep gold; yet one branch shows the old Adam in its vivid self-green.

It has been noticed that plants in which the variegation consists of venation pure and simple show but few, if any, vagaries. Some *Crotons*, for instance, in which the primary and lateral leaf-ribs—veins—are yellow or red, retain their character, and some of our finest foliage plants remain constant in their variations from the type. That fine form of *Ficus elastica*, which most will acknowledge to be a decided acquisition, without any invidious comparison between it and its common but handsome ancestor, invariably keeps its character under all conditions of culture. Variegation is not, however, always an acquisition. In the craze for novelty any departure from the type has been eagerly sought for and seized upon as such, though the gain may not only be doubtful, but actually disadvantageous to a beautiful form in its normal colour. The influence of soil upon some kinds of variegation cannot be overlooked, for many plants in which it is not permanently fixed rapidly run back to their original state when planted or potted in rich compost. This is more or less traceable in *Aspidistra lurida* and *Pandanus Veitchii*, which are best kept on the hungry side by a liberal root allowance of old mortar. Although research has done nothing towards solving the problem of colour more than possible observation, by those sufficiently interested in the subject, under experimental culture may throw some light upon the vagaries of variegation.—K, Dublin.

English Wild Flowers.

IN commenting upon this interesting family of the native Orchids there is much to be said for the Pyramidal Orchis, frequently found on the chalk around the metropolis, and which throws up a dense spike of crimson in July; a delicate variety of creamy white has been found, which does not change by removal. This Orchis has also an agreeable perfume, observable at all hours. No doubt one cause why failures often happened in transplanting was insufficient care of the rootlets.

The smaller wild Orchises, which have a resemblance, more or less marked, to various insects, do not seem to have arrived in the garden at an early date. Some species were tried, possibly, and proved difficult to grow, or their likeness to insects made them unpopular till their day came to be hunted up by amateurs as rarities. A score of years ago, or more, Mr. Treidle, gardener to the Comte de Paris, at Twickenham, had the repute of being the best grower of British species of all kinds; probably he has successors who have made them a speciality. The bee and fly species are mentioned in oldish books on gardening. *Ophrys apifera* is rather a plant of meadows than of woods, but is partial to chalk, flowering in July. A little way off the spike does suggest a cluster of bees crawling up a stem, the flowers being large, and the lip brown with yellow markings; similar, but smaller, is *O. muscifera*, a yet rarer native, somewhat like the insect tribe after which it is named; both species have only a small number of leaves. They cannot be raised from seed, I believe, and the division method is apt to be unsuccessful. There is a tradition that the Roman ladies, from species of *Ophrys*, extracted a dye with which they used to darken their eyebrows.

That the inconspicuous Man Orchis (*Aceras anthropophora*) which has a long spike of crowded scentless flowers, green, touched with brown, had a few cultivators, is a fact which comes from Loudon's reference to it, as a species which could be raised by the seeds. The Bird's Nest Orchis (*Listera nidus-avis*) which has no leaves, and is named from its matted root, he mentions as suitable for growing under trees in a light soil. I do not think that *Neottia spiralis*, the Ladies' Tresses, could claim to be ranked amongst garden flowers, yet its white and green twisted spike is very fragrant. Some of the old authors call it "ladies' traces."

We pass now to a very different tribe, plants, indeed, that resemble our Orchids in being of humble growth and having often succulent leaves. The Stonecrops are inhabitants of every country, but the species of most beauty occur in tropical regions. No explanation is needed of the popular name; the Latin one of *Sedum* belonging to one group, which means to sit, implies that some of the plants look as if they were squatting upon the earth. For centuries, the House-leek, *Sempervivum tectorum*, has been a familiar object on roofs, walls, and odd corners in gardens, though now, I believe, it is rarely found growing wild. Though the large rose-hued flowers are handsome, an old superstition regarded their appearance as a sign of bad luck when a plant was upon a roof. Its leaves were valued for their curative powers, not only externally, for the juice was taken mixed with milk or ale, and the Houseleek upon a roof was supposed to secure it against lightning.

At one time the tallest of our native *Sedums* had a like repute, or the Orpine, Live-long, or Midsummer Man, was also called the "Thunder Plant," and cultivated partly for the reason it was supposed to afford security to persons near it during electric disturbances. A popular book on gardening gives a list of *Sedums*, including several British species, but does not mention this, *S. telephium*, so I assume it is seldom cultivated now, though at the beginning of last century it was grown on rockwork. One reason why people sought the plant was that the flowerhead being hung up, its bowing to the right or the left was taken to indicate the faithfulness of a lover, or the reverse. The species used to occur near London, about Wimbledon Common, for instance. Quite a contrast in size is *S. anglicum*, about 4 inches high, having crowded leaves, and a white cyme often tinged with pink. It is annual, and grows wild chiefly in the West of England. This, and *S. album*, also small, have been planted along borders, but they are apt to die off suddenly. The common Stonecrop, *S. acre*, is, in its variegated form, useful as an edging; it is perennial, and from the pungency of the plant had the old name of Wall Pepper. The Rock Stonecrop, *S. rupestre*, a rare native, has a place on some rough rock gardens; its flowers are the largest of any native species.

Still grown in some terreries, or allowed to ramble over old walls, the Navelwort (*Cotyledon umbilicus*) seems to have been introduced into gardens because of its shield-like leaves and racemes of waxy, yellow flowers. It is a plant of the hills, especially in Wales, but Gerard remarks that he saw it growing, seemingly wild, on a wall of Westminster Abbey. This may be obtained from seed or by division, and is very partial to moisture. It is stated that the Roseroot (*S. rhodiola*) another mountain plant, was cultivated formerly on account of the root, which has a powerful odour of the Rose, and retains it even if dried.—J. R. S. C.

*Cypripedium bellatulum.*

It must be conceded that, though the members of this section are among the most beautiful and interesting of the Orchids, they are yet difficult to cultivate, especially to cultivate them to perfection. They have thick succulent leaves, which are apt to damp if water lodges in them when the house is cool or evaporation slow. The present is just the time when *Cypripedium bellatulum* should be potted, and root action will soon occur. They are best grown in suspended pans without side perforation, and not deep; lime-mortar or limestone may be used to half-fill the pans, and it is advisable to mix some with the compost, consisting of two parts peat, one part fibrous yellow loam, and a little moss and sand. Keep the base of the plants just above the compost, so that when the pans are dipped there need be no fear of wetting the leaves. They enjoy a fairly light position, say in a *Cattleya* (or *Phalaenopsis*) house, suspended from the glass; water very sparingly, except when root-action is brisk and the weather propitious. During winter occasional waterings should be given, and much care should be exercised to avoid any damping. The lovely *C. b. album* requires exactly the same treatment. *C. bellatulum* has thick, fleshy flowers, creamy-white in colour, with crimson-maroon markings.

Cypripedium Druryi.

This is a quaint and interesting species, not large or showy enough to attain to any degree of popularity, but entirely distinct from all other kinds. The spikes are nearly a foot in height; the flowers are yellowish in ground colour, with a dark, almost black, line through the centre of the dorsal sepal. In habit it is like *C. insigne*, but I have noticed in many of the plants a tendency to push one growth above the other, this making it necessary to pot the plants rather low at first, and gradually add to the compost as the plants develop. A native of India, it was discovered some thirty-five years ago, but not introduced into this country for some years afterwards.

The Week's Cultural Notes.

Though not exactly a busy season there is still plenty to do in the Orchid houses. Cleaning is a perennial business, and now that the weather is hot the plants may be, if necessary, removed from house to house in the process of cleaning without any danger. Superficial cleansing is worse than useless, and wastes time rather than saves it. Stages, floors, and roofs should have attention as well as the pots and plants. Plenty of clean soft water is a grand institution in an Orchid house, but too much soap is apt to lead to fungoid attacks, especially on woodwork. Always follow cleansing a house by a gentle fumigation on two successive evenings with one of the excellent fumigating compounds now sold. This will finish off any chance insect that may remain.

Watch *Cattleya gigas* and its varieties as they go out of bloom, and repot them before the new growth begins to root. The young roots will not then be disturbed, and, by pushing freely into the new compost, will soon re-establish the plants. Give *Cattleya Mossiae*

every attention now that growth is free, and place all in flower, such as *C. Gaskelliana*, in a corner by themselves, damping down less in their immediate vicinity in order to keep the flowers from spotting. See that all plants in flower are kept properly moist at the roots, as a dry taste and the strain of flowering may lead to shrivelling of the bulbs.

Most cool house Orchids will by now be rooting very freely, especially such as *Anguloas* and others recently potted. A full moisture supply will therefore be necessary, and, as long as the weather is hot and bright, frequent dews overhead. Never neglect early morning ventilation in this house. Supposing the day to be as hot as the average for this season, it is useless putting on a lot of air at mid-day, as the outside temperature will be above what the inside should be, and the upward rush through the ventilators will suck out all the atmospheric moisture. Air early and late, and shade heavily in the middle of the day, is the best advice for the present.

In the warm house watch the finishing growths of *Dendrobium aureum* and early maturing species generally, giving all such as are made up the full advantage of all the sunlight available. This will ripen the stems, and freedom of flowering will be the result. The Australian and New Guinea section, as *D. Phalaenopsis*, *D. bigibbum*, as well as the late growing deciduous kinds from Burmah, as *D. Wardianum* and its allies, will be in full growth, and must be assisted by a quick hot temperature, moderate supplies of moisture at the root, and frequent syringing on bright days.—H. R. R.

Orchids at Wellesbourne House.

The cultivation of these "aristocratic" flowers is evidently continually extending, and when revisiting gardens it is satisfactory to note in how many instances one finds that a range of Orchid houses has been added to the other attractions. A few years ago Orchid growing was taken up at the above place, the Warwickshire residence of W. M. Low, Esq. Two ranges of houses were then built, and during a recent visit I found another had been added for the cool house species. Nearly all the plants in this structure were newly imported when purchased, less than a year ago, but they are now growing vigorously, and reflect great credit upon Mr. H. Liney, the head gardener. Some of the varieties, too, have proved to be of exceptional merit, and one plant alone would at the present time realise as much as was paid for the whole collection.

In the *Cattleya* and *Dendrobium* houses there were many fine plants, notably one of *Laelia purpurata*, which would delight the eye of an exhibitor on account of its size, vigour, and perfect freedom from

insects. *L. Digbyana* and *Cattleya Leopoldi* were flowering freely, but the flowers of the majority of other species were over. A grand form of *Thunia Bensoniae* was in full beauty. There were two racemes, each having six flowers of a deep violet purple colour. A nice batch of the showy *Anguloa Clowesi* also proved quite an attraction. *Oncidium Rogersi* is a special favourite, and a large stock of plants is being worked up.

I have only attempted to deal with a few of the many features of the collection which struck my eye in passing through; but noting how healthy they all appeared, and how strong the young growths were, I elicited from Mr. Liney the fact that he is entirely discarding peat as a potting material for Orchids, and is using good, sweet Oak leaf soil instead, as he finds the plants potted in it produce more roots than when peat is used, and the growths are consequently stronger.—H. D.



CYPRIPEDIUM BELLATULUM.

Culture of Violets.

MUCH has been written about Violet treatment, and yet it is probably quite safe to suggest that there are still more failures than successes in this particular branch of floriculture. One often hears the opinion expressed that those who are eminently successful with these plants must possess a secret which they studiously hide from their unfortunate brethren. A gentleman called upon us a month ago, and saw the men bundling cowdung into our light and hungry soil. "Now," said he, "I know how to succeed with Violets." Let no one suppose for a moment that the science is so easily acquired. It is not by becoming the proud possessor of this "wrinkle" or of that that you will triumph over the many difficulties which will meet you at every turn in handling these plants, but by unceasing attention to a multitude of details throughout the whole year. And every successful cultivator will doubtless reply that this is true of all that one takes in hand. A few elementary remarks under three or four headings is all that I shall attempt, leaving your readers to fill in the outline according to their varied circumstances and experiences.

I do not consider that Violets will thrive for any length of time on stiff or heavy soils, nor do I think it possible that the best results can be obtained on light, dry, or sandy soil. Steps must be taken in either case to avoid the extremes. Heavy soils, which lack porosity, will produce unhealthy growth, and the plants will become a ready prey to the attacks of fungoid diseases; whilst, on the other hand, it is difficult to produce growth of any kind in dry, sandy, or shallow ground; and here it is, moreover, that the red spider finds its happy hunting ground. If the character of your garden soil approaches either of these extremes it will repay you to make a plot for your Violets. From 10 to 20 per cent. of clay may be mixed with light and gravelly soils, the exact amount being determined by the aspect and depth of the Violet plot. I recommend cowdung as the best manure for light soils. If, on the other hand, your soil is heavy, you may add sand, wood ashes, old potting soil, and leaf mould to almost any extent. Every gardener knows how difficult it is to "cure" a piece of stiff land. In the latter case, use stable manure, which will be all the better if mixed with sawdust. The compost for the frames or pits into which the Violets will be lifted in autumn should be sweet and fresh and not too rich; I would rather bring in rough soil from a Potato plot than use the sickly stuff so often seen in Violet frames.

Propagation.

With new and scarce varieties one is compelled to employ every possible method to obtain stock; but when there is a plentiful supply, unquestionably the best way is to propagate by runners rooted in frames during the late autumn months. Where Violets flourish, runners will be produced in great abundance. The stoutest and shortest-jointed should be selected, only the growing ends being used, to about the length of 3 inches. Stump cuttings, as a rule, are unsatisfactory. Dibble the cuttings in some sandy soil in a pit, as near to the glass as possible. They will root rapidly, and when once rooted they may be safely exposed to almost any weather except the very coldest and wettest. In very early spring—in fact, as soon as the weather will allow—the young plants should be lifted, and a selection should be made. The long, stringy plants, and all which show no disposition to form a crown, should be rejected, the short, stiff, and stocky plants being lined in again, to make a little fresh root growth, and to receive protection from the bitter east wind which we generally get in the month of March.

The planting out may be done as early as the middle of April. Your ladies will probably tell you that Violets deserve the best place in the garden, and they are right. A cool and partially shaded position is desirable. We have grown Violets to great advantage between rows of Sweet Peas. The distance from plant to plant will vary from 8 inches for Lady H. Campbell to 16 inches for Princess of Wales and Luxonne. Plant deeply and firmly (the latter adverb deserves italics). We have found that a good sprinkling at the close of a hot day is particularly beneficial. If done systematically it will also induce the red spider to reflect that life is hardly worth living in a well-kept Violet bed. In July or August the runners will put in an appearance; remove them as promptly as possible and destroy them. The second or third time of going over will give the best cuttings for next year's supply.

Winter Treatment.

By a little careful calculation at the time of planting you may arrange to make your Violet bed of such a shape and size that any pit lights which are available shall nicely cover it. Run a 6 or 8-inch board round the bed to support the lights, and you have thus saved yourself the trouble of lifting the Violets into frames. We know well enough that the latter is the time-honoured plan, but give the new suggestion one trial, and we think it is sure of a second. The framing of Violets may be done in September, but October, or even November,

is not too late. We exhibited Violets largely at thirty Chrysanthemum shows last November, and all the singles were gathered from the open ground, the plants only receiving on the coldest nights the protection of Russian mats, supported by a lath trellis. On the old lines many frames, and much care, would have been necessary to produce a similar lot. Of course we do not advise that the old plan be abandoned; on the contrary, it is still indispensable where a regular supply of bloom is demanded during the coldest months. But in frame culture a few facts must be borne in mind. Do not lift too soon, do not feed too highly, do not nurse too tenderly. If the Violets are grown in pots, for the embellishment of the conservatory, be careful to stand them in a cool place, and never allow them to suffer through want of light, air, or moisture. It should never be forgotten that Violets are hardy plants, and will resent unnatural treatment. Remove all decaying leaves, and through every stage of their growth see that their surroundings are sweet and clean. If these directions are followed, we think that success will follow in most cases.—JAMES C. HOUSE, *Westbury-on-Trym*.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

As the flush of the Rose shows weakens, the short, bright little reign of the Carnation comes in substitution. To-morrow (Friday) will be the great southern show of the National Carnation Society, and lesser exhibitions, largely comprised of Carnations, will follow immediately in all parts of the country. Now that Mr. Martin Smith has yearly such splendid advances to offer, and seeing these varieties of Carnation remain at their higher standard of excellence compared against past novelties, the culture and regard for Carnations may well be expected to progress. We are not a sombre dispositioned people; we appreciate the efforts of those who add greater beauty to our world, and are easily led to follow them in their endeavours.

Chelsea Carnations.

At the close of last week I had an invitation to view Messrs. J. Veitch & Sons' collection of new and tested varieties in the Royal Exotic Nursery at Chelsea. The plants are nearly all plunged in ash-beds in the open air, and have developed in very good condition this year. The majority of them are making robust "grass," which will shortly be used for propagating purposes. They are all clean and healthy. Mr. Weeks, the grower, favours layers when propagating his border varieties; and "pipes"—that is, cuttings—for tree Carnations. A few references to the more "taking" herewith follow:—

New Border Selfs and Fancies.—Amongst the varieties of 1900 and 1901 are the following:—Lady Jane Grey, with large and handsome flowers, of a beautiful and strikingly distinct lavender colour; Rosalind, with sweet scented deep crimson flowers; Don Carlos, a distinct Fancy, with large handsome flowers, yellow ground, striped and edged with rose-pink; and Aleinoris, a heavy purple-edged yellow ground. There are other good new varieties, such as Quintin Durward, vivid scarlet; The Naiad, with deep yellow blooms, and possesses a vigorous habit. The Khedive is a very pleasing Carnation, bright yellow, heavily marked and tinted with rose.

New Yellow-ground Picotees.—Of first-rate yellow-ground Picotees we find Daniel Defoe well to the fore. The colour is bright, and broadly edged with rose-red, the form being good. Caracci has also a rose edge, and is very vigorous; while Herodotus, with lemon ground, has a well-defined and very narrow reddish-crimson margin. Lady St. Oswald variety is really very handsome, and well worthy to bear the title of the beautiful lady so prominent in high society. Lastly there is Langan, of a clear yellow colour and well-defined purple edge. The form also is superb.

The foregoing are all noteworthy, and comparatively new; those now to be mentioned are better known. Amongst the best of self varieties is Isinglass, a brilliant scarlet, introduced about three years ago. Dndley Stuart as a scarlet self stands out prominently; it has large blooms on long footstalks. Boadicea, on the same lines, has rose-scarlet blooms; and Comet is maroon-crimson, possessing smooth petals. Endymion is very distinct, with beautiful salmon-pink blooms. Again, few Carnations are more brilliant than Francis Wellesley, with large, full, deep carmine-rose flowers on long stalks; it is one of the finest and most attractive; Sweet Brier, with large, pale scarlet flowers, was much appreciated; while from amongst other good yellows we particularly noted Hidalgo, Queen of Sheba, Rizzio, very fine; Aglaia, and Benbow, which are also very superior. Czarina is a conspicuous yellow ground Fancy, heavily marked with bright scarlet. Picking out a really good white, what excels George Maquay? None; it is floriferous, of good form, robust, and perfectly white. Much the Miller should also be included in a collection, and no one should omit the pure white Beauty of Exmouth, a superb sort. Goldyllocks and Zingara are two prominently good Fancies.

Older Yellow-ground Picotees.—The Gift is one of the best yellow-ground Picotees, edged scarlet; and with it we may include Mrs.

Tremayne, deep yellow, edged scarlet; Hygeia, median edge of rose pink, and clear yellow ground; Day Dream, flowers full and of good form, scarlet margin, barred with same colour; Heather Bell, a handsome sort with rose-pink edge; Borderer, clear yellow, with a clear rosy edge; together with Day Dream, Alberta, His Excellency, Lady Bristol, and Duke of Alva.

Picotees with a white ground embrace Mrs. Sharpe, having a heavy rose edge; Edith D'Ombain, with moderate-sized flowers, edged bright rosy red; Norman Carr, which is one of the best, having the qualities of floriferousness, size, and pleasing appearance, edged heavily with crimson; Thomas Williams has a neat flowing violet edge; and Carl Schultz has petals with a heavy maroon edge.

Of older sorts, three of the best crimsons are Mrs. Macrae, Sir Bevis, and Comet, each grand. Uncle Tom, of course, is known and prized as a rich, deep, blackish crimson. Few scarlet varieties can match Maréchal Ney. Seagull, with huge and beautifully formed blooms and pale flesh; Cantab, bright crimson scarlet; Joe Willet, another good scarlet; Rose Celestial, as a distinct rose variety; and though a few very striking whites have been named, the variety Mrs. F. Watts justly deserved full recognition. There are many other good Carnations well worthy of being selected, but those I have now referred to will not be found to disappoint the cultivator, and are all more or less distinct. Mrs. W. Lawson Carnation in pots was in good "form," though making very little "grass."

A Fern Nursery.

While many writers on florists' flowers lament the decadence of one or other of their pet subjects, very, very few seem to regret that the beautiful forms and tints of exotic Ferns are not more appreciated. Nor do we find ferneries being extended, and Fern collections are usually regarded in the light of necessary adjuncts that supply the requisite selection of green foliage (or fronded) plants to enhance the arrangement of plant groups, or for effect in floral decorations. Their numbers are few indeed who grow Ferns out of sheer love for their forms, tints, and peculiarities; yet, who is more zealous, more energetically enthusiastic, or more consistent in his devotion to his pet subject than the pteridologist? Speaking for myself, I love tropical Ferns, at least the Gymnogrammas, Pterises, Adiantums, and a few of the Davallias, Woodwardias, Acrostichiums, Nephrolepis, and Polypodiums. A few days ago I had the pleasure of visiting one of the finest nursery collections of Ferns to be found anywhere in the South, that of Messrs. J. Hill & Son, Barrowfield Nurseries, Lower Edmonton. Here were noted such splendidly ornamental varieties as Mr. Child's form of Pteris Wimsetti, which, however, is simply named Pteris Childsi. If all the collections in England were hunted through, a handsomer or more variedly useful Fern could not be found. The centres of the pinnae composing the fronds are flattened out to the breadth of half an inch, and the margin of each lobe is fringed with narrow, serrated outgrowths. It is light green, vigorous, and can be employed cosmopolitanically. Pteris regina cristata has silvery veins and central epidermis, and crested tips. The indispensable P. tremula is grown in batches of thousands; in the market the salesmen shorten the name, and speak simply of "Tremas." Pteris scaberula furnishes a finely serrated and very graceful variety; while P. leptophylla has long, narrow segmented fronds.

It was interesting to inspect the pit devoted to spore cases, and within this were dozens of pans with sporelets and fernlets in all stages of development. Here were to be seen several men busily engaged in separating the best developed panfals and pricking these out in tufts. The men were in an excessively close shed, with no clothing but a shirt, trousers, and covering for the feet. I believe these workers are well remunerated. The houses are all heavily shaded with whiting, which sticks sufficiently well because a quantity of starch is added during its preparation. I asked Mr. Dyson (an able and genial man quite above the average in his knowledge of Ferns), how it was that the marketmen are able to grow and offer those pale green Ferns, which are so captivating and so greatly requested. His reply conveyed that light and air were liberally allowed by market Fern growers. Even tropical exotic Ferns in such nurseries as Hill's have a current of air playing on them from above on all such mild days as we are enjoying at present. The shading, too, is moderate, and no heavy blinds are ever employed; the result follows as a natural consequence that the plants are firm, bright, lively green, and ready for the knockabout conditions of marketing at any and all times.

However, I am leaving little space to enumerate some choice varieties I desire to notice. First I would name the graceful Davallia tenuifolia Veitchiana, suitable for growing into specimens. Very different from it is D. parvula, so small that numbers can be grown under a moderate sized bell-glass. It is rather difficult to succeed with, but is worthy of care. D. alpina grows between the chinks of stones in indoor rockeries, and requires similar treatment to D. parvula. D. assamica is always very dark in colour, tinged with chocolate brown, and is a very rare and handsome species. D. fijiensis elegans is usually got by division, and comes both truer and more speedily to its perfectly matured state than from spores. D. (pallida) Mooreana is one of the largest growing and most magnificent species in existence; and its usefulness for growing into monster specimens is proven by the many samples that are exhibited at North of England horticultural exhibitions. Sometimes these are staged in huge tubs, which require

the strength of several men to transport. Davallia aculeata and D. feniculatea might also be mentioned for their superior elegance; as also D. dissecta.

Coming to the Polypodiums, what is more serviceable for decorative purposes of a special nature than P. appendiculata, whose fronds are dissected to the midrib, and is altogether very distinctive? The variety named vacciniifolium has long been a special favourite of mine, and for growing upon pieces of cork or blocks of wood to hang by the side of a tank or water pool I can strongly recommend it. Few unacquainted with this Polypodium would consider it to be a Fern at all. It has long, hairy, drooping shoots with oval, somewhat succulent leaves.

The Adiantums are more numerous. A. macrophyllum assumes a bright cerise mauve tint at this Edmonton establishment. The latter characteristic is a feature of a large number of Messrs. Hills' Ferns, and cannot very well be accounted for. They frequently become quite green when they are sent out to gardens and other places, but while they remain in the air of Lower Edmonton their pinkness and ruddy tints remain distinct, well spread and suffused. Adiantum Faulkneri is not appreciated on the market stalls because of its refined qualities. No garden collection, however, should be without it. Then there is A. gracillimum, so necessary everywhere, as well as A. cuneatum by the thousand, and A. Farleyense, whose idiosyncracies have been thoroughly mastered here. A. cardiophyllum is handsome, as is the true Veitchianum, which may be described as really the best of the rosy tinted Ferns. It is a dream of loveliness; so is A. scutum roseum.

Acrostichum aureum furnishes a large, pale pea green, broad-fronded Fern, at once conspicuous and ornamental for grouping with the larger flowering plants. Pellaea rotundifolia is another of those pretty little subjects for the chinks of indoor rock erections. It grows freely. The Crested Woodwardia must be included in this Fern selection, and its presence will add lustre to any collection. Deparia Moori has broadly spreading bright green fronds, and it, too, is exceedingly beautiful. When we review the list, what a fine array we have to choose from! All of these are high-class Ferns of varied form and appearance, yet each lovely and interesting in their several representations. To conclude, I would note Brainea insignis, a dwarf Tree Fern; Lomaria attenuata, distinct, and suitable for a variety of decorative purposes; Lastrea erythrosora, a bushy growing, rosy tinted species; Doodia aspera multifida, a hardy little chap for stonework; Lastrea lepida, Adiantum tinctorum, Dicksonia antarctica, the commonest of the Australian Tree Ferns; Blechnum brailiense, resembling the latter in habit; besides numerous Nephrolepis, but lack of space debar me from describing them. The above may, however, be useful to some grower who desires to know of suitable Ferns.—WANDERING WILLIE.

Grapes Scalding.

IN a hot and droughty season Grapes are scalded, and the leaves of Vines scorched to a greater extent than ordinary. Perhaps these troubles prevail most where the panes of glass are large, and the ventilation inadequate, but I have had both severe where the panes of glass were small and the ventilation all that could be desired, only it had been properly attended to. Indeed, scalding occurs oftenest through neglect of early ventilation and a gentle warmth in the hot-water pipes, so as to maintain a buoyant atmosphere. There is no question that it is accelerated by the same conditions that cause the foliage to scorch, namely, late or imperfect ventilation on some bright sunny morning, whilst the internal atmosphere, and even the berries, are saturated with moisture. Both scorching and scalding can be avoided by careful attention to the temperature and ventilation. Air should be admitted rather freely, especially in the early part of the day, with a little warmth in the hot-water pipes to maintain a temperature of 70° on dull days and 65° at night, with air constantly in sufficient amount to allow of a circulation. Under those circumstances scalding does not occur.

Scalding of the berries may occur when they are about half-grown, though generally at the close of the stoning process, or a fortnight to three weeks before and up to commencing to colour for ripening. Lady Downe's is the variety most liable to scalding. Muscat of Alexandria comes next in prevalence, but Black Hamburgh and other varieties will scald, especially in hot seasons, particularly where the Grapes are exposed to the fierce rays of powerful sun after a period of dull weather. A slight shade is advantageous at this period and during the early stages of ripening in houses with large panes of glass, particularly for Muscat of Alexandria, a double thickness of herring nets drawn over the roof-lights being of great service in breaking the fierce rays of the sun from mid-June to the latter part of July or August, according to the time of the Grapes finishing stoning. Some vineries are the better for a slight shade during the hot summer months. This applies to those with large panes of glass and clear, especially in the northern parts of the kingdom.—G. A.



Lilium Lowi.—To this very distinct and pretty Lily a first-class certificate was awarded by the Royal Horticultural Society on July 11th, 1893, when it was exhibited by Messrs. Hugh Low & Co. The blooms are of medium size, white, covered with bright crimson spots. The leaves are deep green, about 3 inches in length. It is sometimes named *L. Bakeriana*.

Lilium japonicum var. Alexandræ.—When this *Lilium* was exhibited in the Royal Horticultural Society's Gardens at Chiswick in 1893, it came from two firms—namely, Messrs. J. Veitch & Sons, Ltd., and Messrs. Wallace & Co. of Colchester. The name *Ukeyuri* was at that time applied by the Messrs. Veitch, while the Colchester firm named it *L. Alexandræ*. Mr. J. G. Baker, F.R.S., of Kew, considered this Lily as a variety from *L. japonicum*. It is one of the handsomest, though least known, of the *Liliums*. In the year above referred to (1893) it received a first-class certificate.

Typha latifolia.—The Reed Mace or Cat's-tail (and sometimes erroneously called the Bullrush) has its flowers in dense, dark coloured, cylindrical, or oblong spikes, the upper and more slender part consisting of male flowers only, each consisting of several (or three) monadelphous stamens, and the lower or stouter part of female flowers with a single ovary. The perianth in both male and female flowers is reduced to a few slender hairs. The rhizome contains much starch, and the pollen is made into cakes in Sind and New Zealand, and used as a food. The Great Reed Mace is one of the most handsome water-loving plants.

Sowing Elm and Maple Seeds.—There are two Maples, *Acer rubrum* and *Acer dasycarpum*, the red and the silver respectively, and almost all Elms, which ripen their seeds in spring. To have success in sowing the seeds, says Mr. Jos. Meehan, in "The Florist's Exchange," they require to be sown very soon after being gathered. Unlike many other seeds, they will not keep their vitality long, and the best success comes from immediate sowing. But though many failures come from delaying the sowing, if the seeds are kept in a cool place, free from air which would dry them out, it is not impossible to have them germinate when sown in the autumn, as a case of this kind, with Red Maple seeds, came under the writer's notice. There are many Maples which do not ripen seed in spring, but, so far as I know, there is but one Elm of all our native sorts, viz., the *Ulmus crassifolia*, a Texan one, which does not ripen until the very last thing in autumn. Seeds of the early ripening kinds, sown now, give seedlings of nice size by September or October.

Hardy Acacias in Bloom in Crief.—A correspondent writes:—Again the Acacia growing in a garden on the Comrie Road, Crief, has come into bloom. The Acacia comes of a large family, there being over four hundred varieties, but, so far, this specimen (which is, of course, of a hardy variety) on the Comrie Road has not been classed at all definitely by any of the local arboriculturists. The tree, which is situated in the south-west corner of the garden of Aveland House, Crief, the property of Mr. H. B. Neave, is about 40 feet high, with light graceful stem. The foliage is that of the hardy Acacia now so common to all gardeners, and which are numerous all over this district. It was commonly believed that the Acacia would not bloom in this climate, until two years ago an arboriculturist passing through the town noticed this one in bloom, and communicated with the "City Press" on the subject. This tree is believed to have been brought from the Continent of Europe by the late Dr. Guise, who at one time resided in the house. It is not quite clear why this particular tree should bloom profusely. It cannot be on account of its age, for a young shrub of the same species is also said to be in bloom in a garden on the same road. Further in a grove of Acacias of the same hardy variety in a nursery on the same road, having an equally well sheltered and sunny position as their flowering neighbours, not one is showing the slightest evidence of bloom, and the same may be said of many others situated in many parts of the town and district, including Drummond Castle Gardens, which have been examined during the past week. The bloom of this Acacia is in clusters similar in size and form to that of the Laburnum, but of a soft white colour with a very delicate perfume.

Ruta graveolens, the common or garden Rue, has a very powerful and disagreeable odour, due to the presence of a bitter, nauseous, volatile oil in the leaves. The plants of the order Rutaceæ are remarkable for their strong aromatic or foetid odour. They have usually anti-spasmodic and tonic properties.

Senecio auriculatissimus.—Quite a distinct change has been made in the section of the genus *Senecio*, which is perhaps best known by the name of *Cineraria*, by the introduction of this yellow-flowered species. Seeds were sent to Kew in 1889 from British Central Africa, and it flowered for the first time in 1900. It is a plant of somewhat straggling habit, with small, curiously shaped, glaucous leaves, with large-winged stipules, and produces large, loose inflorescences of bright yellow flowers both from the apices of the branches and axillary buds. The individual heads of flowers are 1 inch across, and composed of ray and disc florets, the former being similar in size to those of *S. cruenta*. It grows well under similar conditions to the garden *Cineraria*, and may be trained round stakes or allowed to clothe the base of a pillar. If it could be crossed with the better known *Cinerarias* a distinct race should result. Several plants are to be seen in the temperate house at Kew.—W. D.

A Few Good Carnations.—When at Wellesbourne House the other day, Mr. H. Simes showed me some beautiful flowers of the variety *Mrs. W. Lawson*. They were of a lovely bright rose colour, were large and full, and were borne on very stiff stems. It is evidently a grand variety, but, alas! it has one weakness—viz., a distinct aversion to the production of young shoots; it is therefore not likely to become very common for some years, unless this weakness can be overcome. *Cecilia*, a rich yellow, is one which all should grow; *R. H. Measures* and *Iolanthe* are good, self-coloured flowers; *Mrs. Clibran* is a free bloomer, which all should grow, it struck me as being particularly distinct. The best description I can give of it, from memory, is that the colour is rose-crimson edged with white. *Lady Margaret Ismay* is a large full flower, with a white ground, edged and striped with magenta. Each of the above varieties are worthy of the attention of those who like a good display of Carnations in pots during the spring and early summer months.—H. D.

Rubus incisus.—Though a very pretty and ornamental plant, the early flowering season of this species excludes it from outdoor collections except in places where sharp spring frosts are not experienced. It is a native of China and Japan, and makes stout, fairly straight, many-branched stems, 7 to 8 feet high, clothed with numerous small, finely cut leaves. It is deciduous, but starts into growth very early, the leaves being well advanced early in March. About the end of March the first flowers begin to expand, the flowering period continuing until mid-April. The flowers are borne singly from every bud on last year's wood; they are pure white, rather more than an inch across, and pendulous. By growing in a cold house where leaves and flowers cannot be injured by frost, a charming combination is made by the elegant, pale green leaves intermixed with white blossoms. Like the majority of *Rubus*, it grows well in any good loamy soil, and gives very little trouble. After flowering, if the fruit is not required, old flowering wood should be removed to give light and air to young growths. In the Himalayan house at Kew a plant may now be seen.—W. D.

Cupressus funebris var. glauca.—Of all cultivated Conifers there is not one that can lay claim to more gracefulness and beauty than this, though it cannot be said to be by any means the most useful for decorative work out of doors, as it is slightly tender, and only succeeds in favoured localities. In a cold house it is quite at home, grows freely, and does not mind a few degrees of frost reaching it, providing the shelter is sufficient to keep off excessive cold. It is a native of China, where it is said to be a favourite plant for growing in cemeteries. It was introduced into European gardens in 1848 by Robert Fortune, but has never become very common. It makes quite a tall tree, with elegant pendulous branches clothed with beautiful glaucous foliage, the branches often hanging down to a length of 2 or 3 feet. It succeeds well grafted on stocks of *C. Gowniana*, *Insipida*, and other semi-tender species; and likes a rather light, well drained, and loamy soil. Grown in large pots or tubs it makes an excellent plant for the decoration of corridors or rooms, keeping in good condition for a considerable time. It is occasionally met with under the names of *C. pendula* and *C. kashmiriana*, which are synonyms of *C. funebris*.—D. K.



Early Potatoes.

IN reference to Mr. H. Richards' article on the above subject on page 5 of the Journal, I should like to mention that I find the old Snowdrop an excellent second early Potato on a light dry soil with a gravelly bottom. It is an immense cropper, even in the present dry season, and of first-rate quality and flavour.—W. R. R.

Exhibitors as Committeemen.

I READ with interest "W. S.'s" version *re* committeemen being exhibitors. As my opinion is very strong on this subject, and "W. S." has championed the committeemen-exhibitors, I will do the same for the outside exhibitors. I can with confidence recommend all exhibitors to try and get on committees. "W. S." seems to say they are useful men, but still it would be fatal to the progress of the work of the day if they were all committeemen. Surely one exhibitor is as good as another as regards helping on the show. Why should committeemen-exhibitors take advantage over the outside exhibitors? for outside exhibitors expect to find all exhibitors on the same footing. If "W. S." has been to shows as an exhibitor he will probably have heard the request made when judging time arrives—"Outside, gentlemen; all exhibitors outside." I have heard some of these committeemen-exhibitors make this request, then, after all had cleared out, they themselves would go round with the judges. Now, "W. S.," take a good show honourably carried on, and which encourages every line of horticulture, you will find none of the committeemen are exhibitors. I have been secretary of a show myself, and when I took on the work one of my objections was on this matter of committeemen-exhibitors. I always looked well after all exhibitors, and we had a good show. Supposing, "W. S.," there was an alteration in the schedule, and it happened to be to the committeemen-exhibitors' benefit, the outsiders have to wait a month or two before they get the schedule, and can prepare for the show. This is only one of the many advantages of the committeemen-exhibitors. My experience teaches me, too, that men experienced in the art of exhibiting make the best committeemen; but if the exhibitor is a committeeman he looks after his own interest.—GEORGE WADESON, *Doveridge Hall Gardens.*

The Shrewsbury Schedule.

AFTER pleading guilty to lethargy, and readily admitting the superior vivacity (but not experience, though) of Mr. Crump, I thought to escape any more hard knocks, but it appears to be a case of having to face a whole gamut of epithets. Because I failed to appreciate the "clear and corroborated testimony" furnished by Messrs. Adnitt, Wilson, and Crump, I am not only sceptical and obdurate, but also vindictive and shuffling. This, forsooth! from an opponent who takes the high ground of general superiority! Not satisfied with this, Mr. Crump also threatens me with a "bogey man" in the shape of "a certain V.M.H. on the Fruit Committee." After waiting another week to hear what this "pie fingerer" has to say upon the subject, I now claim the right of offering a few comments upon what the other lovers of pastry have advanced.

Mr. Adnitt I have the greatest respect for, and from what I know of him should say he would not dream of making a wilful blunder, and it is not often there is much "mental confusion" about him. Knowing him so well, I also boldly affirm that Mr. Adnitt would be equally careful not to claim any real knowledge of, say, varieties of Grapes. He was wrongly advised by men who ought to have known better. If necessary to limit white Muscats to four bunches in class 73, why not state that much in so many words, and not make the blunder of bracketing Canon Hall with Muscat of Alexandria? for that is what it amounts to as worded in the schedule, Mr. Crump's wrath notwithstanding.

The judges who awarded the first prize to Muscat of Alexandria and Canon Hall Muscat in the class for two distinct varieties knew their business, but surely it is most inconsistent to group these two perfectly distinct sorts "as one variety" in class 73, and to admit them as distinct in another, thereby denying to the successful growers of Muscats an advantage in the matter of marks in one class and giving it to them in another. Does Mr. Adnitt mean to imply that legal opinion had to be invoked in 1899 to decide whether Canon Hall is a Muscat Grape or not, or whether it is identical with Muscat of Alexandria, or not? Will he find time to state exactly what the difficulty was, and does he still think the present wording of the conditions governing class 73 the correct way out of the difficulty? Is it too much to expect him to admit that a blunder was made?—W. IGGULDEN.

Ants.

IN answer to your correspondent, "A. C.," on page 13, of July 4th, I had a small house of Ferns infested with ants this season, so I mixed a quarter of a pint of Jeyes' fluid with 4 gallons of water, and well washed the staging and front wall of the house with it, with the result that I have not been troubled since with ants. I had previously used it in one of my plant houses, but I was fortunate in finding their nest, and poured the fluid direct on it with the same result as above. I should advise "A. C." to first try it by soaking a sponge in the solution, and lay it on the ground round the stem of the tree, and if their nest is sufficiently far enough from the tree to pour some of the fluid on it.—W. G. SAVAGE.

A LADY from Germany tells me that she effectually destroyed ants by sprinkling their runs with insect powder. A gentleman here is suffering from a plague of them in his garden (lawn), which is overrun by them, on too large a scale for insect powder, and he cannot find their nests. The difficulty is to destroy the ants without injuring the grass.—H. C. RIPLEY, *Minster-Lovell Vicarage, Witney.*

The Lace-wing Fly.

I FIRST noticed the appearance of this insect this year on June 25th. It belongs to the same order as the dragon flies, viz., Neuroptera, and it is, I think, more lovely, if only less significant. Such a delicate, flimsy-looking creature seems as if made only for the outward beauty it possesses, and when once it is pointed out to the uninitiated it can hardly fail to be forgotten. But I think it is so little known to the average gardener that he neither knows, or perhaps cares, about its beauty, or the amount of use it can be the author of to him.

Few of the young gardeners of my experience know what an aphid is, and, if the insect is pointed out, they do not know that it is one of the best friends they have in the garden. Its voracity for green fly is, I should think, only equalled by that of the modest ladybird. The aphid is the larva of the lace-wing, and is such a curious looking insect that it does not fail to attract attention, but it is often, I think through ignorance, taken as an insect harmful to the plant it is found on, and very naturally killed. An incident of this nature I was the disgusted witness of last year. I pointed out some lions to a Chrysanthemum grower, on whose plants there also was a noble army of aphids. "Yes," he said, "I kill all those," meaning the lions, "guess they're no good." "Alas! my friend," said I, "would that you were as learned in entomology as chrysanthology (to coin a word), and then you would know the evil, too late to remedy, so unthinkingly committed through ignorance." The lace-wing may now be found at evening time flying about the Rose garden, and Chrysanthemums are always, when out of doors, good subjects to examine for lace-wings. The lions may be seen in the day, but not easily at eventide.—W. H. R., *Kent.*

[Has our correspondent taken special notice of the beautiful eyes of this fly; or experienced the nauseous effluvia which the excreted liquid it voluntarily ejects when captured, imparts?]

Gros Maroc Grape.

"R. M." need have no fear about getting a crop on his Gros Maroc if he will keep it well stopped during this summer, so as to keep the foliage thin and to get the wood well matured, and at the winter pruning to prune it long, leaving about 6 inches of the current year's wood. My Vine has two rods, on one of which are twenty-four bunches, and on the other fifteen; the rods are 12 feet long, the bunches range in weight from 1 lb. to 2 lbs. I should say the total weight is between 40 lbs. and 50 lbs.—JOHN KITLEY.

"R. M." seems to doubt the veracity of my statement anent Grape Gros Maroc (see page 13, July 4th), simply because he is not alone in being unsuccessful in the culture of this variety. He ought not to think it so very extraordinary that there are growers who can succeed, and even grow large bunches as well as large crops. I have little doubt in saying that there are other successful growers. If not, why is the Grape grown for market at all? A market grower cannot afford to grow scanty crops. I certainly am not acquainted with any growers of Gros Maroc on a large scale for market, but have seen the Grape exhibited in shop windows often, and at prices realised nowadays it stands to reason it is not being grown at a loss. I am sorry to say I am not in a position to make public the locality of the Vine or name of the grower, the latter being quite unaware that any notice concerning his Grapes had appeared in print till several days after publication; but I think I have succeeded in getting him to regularly subscribe to the Journal ("Our Journal"), so "it's an ill wind that blows nobody good." The rod is 18 feet in length, and nineteen years old; now there is added two extension rods, one on each side, these are three years old, and carry what bunches there may be room for. I have seen five and six.—W. H. R.

[Our correspondent sends, in confidence, the name and address of the grower of Grape Gros Maroc, to whom he formerly referred as being so successful. "R. M." will please accept the reply from "W. H. R."; one is not always free to publish others' names and addresses.—ED.]



Rose Hedges.

WHY should the majority of hedges planted in gardens be formed of Holly, Box, Yew, or Privet? They are, of course, valuable in some cases where they form a thick set boundary, but when only a screen is necessary to divide one part of the garden from another, by all means let us have something as attractive as possible, something which will gladden the eye with beauty in summertime, and laden the air with sweet perfume. Then let us have hedges formed of Roses. Happy, indeed, was the thought which prompted the planting of the first Rose hedge, for the idea has "caught on," and many hedges will in the future be "things of beauty" indeed. Before planting it is necessary, in all instances, that a good foundation be laid by thoroughly preparing the soil. Mark off a space 3 or 4 feet in width, trench the land deeply, add plenty of manure, and plant during autumn or winter. In pressing cases the planting may be done in summer if the plants are obtained in pots, and copious supplies of water can be given.

It is now necessary to consider the various forms of hedges, and the varieties of Roses suitable for each. For a tall hedge, from 5 to 8 feet in height, some kind of support for the plants will be necessary. A simple method of erecting a support is to drive deeply into the ground stout poles, at distances of about 9 feet apart. These should be connected with four or five rows of strong galvanised wire, strained very tightly. If every alternate pole is allowed to rise 3 or 4 feet above the top wire, the Roses, when trained to them, will break up the outline, and form a series of miniature pillars above the hedge. Galvanised iron uprights may be substituted for the wooden poles. The Roses should be planted 4 feet apart, be pruned hard the first spring after planting, and afterwards be allowed to ramble freely. As growth advances, tie the shoots to the wires and pillars until they have covered their allotted space, then allow them to hang somewhat loosely. The only after pruning necessary will be to cut out dead and very old wood, so as to allow room for young shoots to develop, and also to remove the points of those shoots which overhang walks too much. Do not forget to give such a hedge its annual dressing of rich manure, for the "Queen of Summer," even when growing in a hedge, still needs liberal fare.

Good varieties for planting in the way above indicated are—Aglaiia, yellow Rambler; Crimson Rambler, Thalia, white Rambler; Euphrosyne, pink Rambler; Paul's Carmine Pillar, Reine Olga de Wurtemberg, bright red; Longworth Rambler, bright crimson; Ayrshire Ruga, pale flesh; Polyantha Simplex, white; Gracilis, bright pink; Alpina, bright rose; and Dundee Rambler. Truly a hedge formed of a few, or all of the above Roses, would in its season give a picturesque display such as one might look for in vain at any show. There are some, however, who for various positions prefer hedges of moderate height, from 3 to 5 feet, which need no supports. There are several species and varieties of Roses splendidly adapted for such purposes. The yellow and copper Austrian Briers, if planted together, form a thick and beautiful boundary for a Rose or terrace garden. Plant them in a double row in zigzag fashion. *Rosa rugosa alba*, *R. rugosa Blanc Double de Coubert*, semi-double white; and *R. rugosa rubra*, are also suitable for the same purpose. Any of the Hybrid Sweet Briers will form good hedges too. Some of the best varieties are Amy Robsart, deep rose; Flora McIvor, white; Lady Penzance, copper yellow; and Jeannie Deans, scarlet crimson. During the autumn months their bright red seed pods form an additional attraction, and they are most valuable for decorative purposes when cut. Almost everybody knows the old common pink and crimson China Roses; they also are useful for forming stiff upright hedges. Fabvier, crimson scarlet; and Ducher, white, are other good China Roses useful for the same purpose. The pruning necessary for hedges of this description is to cut out dead wood, and in March clip lightly with the shears to keep strong shoots from spoiling the outline.

Unightly fences are still sometimes met with in gardens both large and small; no one should tolerate so great an eyesore in such days as these, when Rose trees can be bought so cheaply. If the position is a fairly open one, and not greatly overhung by trees, by all means plant Roses, and let them ramble over the fence; the eyesore will then be quickly converted into a beautiful Rose hedge. All the varieties recommended for tall hedges will answer in this case.

There may be, among the many who scan these notes, a few whose thoughts go back to the days of old, to some dear old-fashioned garden in the country, around which cluster memories of youth, and those memories may awaken visions of the lovely old striped Damask

Roses. These, too, if planted a couple of feet apart, will form a splendid hedge, which may be kept to a height of 2 or 3 feet by close or moderate pruning. To those who belong to the "days of old," but whom we still delight to have with us, I say, Plant the old striped *Rosa Mundi*, or Village Maid, and the York and Lancaster, red and white striped, side by side, and let us all forget the strifes of old when our land was laid desolate, and unite in doing homage to the "Queen of Summer" while enjoying the beauties with which she surrounds us.—H. D.

Superior Climbing Roses.

THE most effective climbing Roses are those which are free in growth, clothing pillars, walls, or trellises, or whatever they are trained upon, with strong and vigorous stems, luxuriant foliage, and carry abundance of flowering shoots. In the case of these quantity is before quality, a climbing Rose not being expected to produce flowers of exhibition merit. In a sense, however, the flowers have a special merit of their own, and in their particular way they are better adapted for the place they fill than the most correctly built and formed flowers could be. The main purpose of climbing Roses is to exhibit a loose, rambling, informal beauty of prolonged duration; to create an effect not only with the flowers, but with a graceful display of vigorous growths, depending sprays, charming buds, as well as half-opened and fully developed flowers. The various sections of Roses differ somewhat in their manner of growth and the production of blooms, but all must have the capacity of producing long stems from which lateral shoots may be produced bearing the blooms. These may be cut out occasionally and their places taken by others, as by this means the Roses may be kept healthy and vigorous. Frequently, however, the exigencies of the position on which the Roses are trained will not permit of this being carried out to the base of the plant. This can then be altered to the base of the position on which the tree is trained, the main stem from the ground where the tree is planted being thick, woody, and devoid of shoots or foliage.

Amongst the earliest to flower, and continuing some time in attractive condition, are the Polyantha or Multiflora Roses. Crimson Rambler, with its fine clusters of small, red, double flowers, which are numerous and pleasing, commands considerable popularity among the climbing Roses used for the decoration of many modern villas; when well established, strong growths 8 to 10 feet long are sent up; the foliage is of a dark green glossy character. Carmine Pillar is similar in colour to the last, being carmine crimson, but the flowers are single in character; it is of robust growth; the blooms are of large size, sweetly scented, and abundantly produced. Climbing White Pet is a very pretty companion and contrast to Crimson Rambler; the clusters are numerous, and the white blooms, which are very pure in colour, have short and numerous petals, the whole bloom being very full and double. Thalia is a new climbing Rose belonging to this section, and produces bunches of creamy white flowers, it is known as the White Rambler. Euphrosyne has carmine buds changing to pure rose, this is termed the Pink Rambler. Aglaiia has canary yellow flowers in pyramidal clusters, and is known as the Yellow Rambler. Hélène and Psyche are two new seedlings from Crimson Rambler. The former grows considerably stronger than the Crimson Rambler, the flowers being of a violet colour; Psyche has large, pale, rosy pink blooms in clusters. Electra is a new and attractive Polyantha variety, with pale, yellow flowers, and is becoming popular.

The Evergreen Roses are valuable climbers, and grow rapidly. The term evergreen is applied because they retain their foliage throughout the greater part of the winter; the blooms are in bunches. Flora is a beautiful variety, blush and white, the blooms being very freely produced. Félicité Perpetué has blooms of creamy white, reverse of petals pink. It is a splendid pillar Rose, the immense clusters of blooms being exceedingly attractive.

The Ayrshire Roses are of slender trailing habit and very rapid growth. Ruga, pale flesh, and Dundee Rambler, white tinged pink, are two of the best varieties; both are large and double. They are specially adapted for large rough poles, stumps of trees, and old walls. Among the hybrid climbing Roses there are a few excellent varieties. Madame D'Arblay is one; it is a very free flowering, small cluster Rose, having white blooms; the foliage is small, growth strong. The Garland has small white and lilac blooms in very large clusters. Longworth Rambler is a superb variety, the bright crimson blooms being produced in clusters. Noisette Roses comprise some of the choicest, and these invariably command a good position on a south aspect in very good soil. Alister Stella Gray is a climbing miniature flowered variety. The blooms are similar to Crimson Rambler, but in colour yellow, with orange centres; they are produced in clusters of medium size. Aimée Vibert is a pure white, small blooming variety, also in clusters. W. A. Richardson is beautiful in the bud; the colour is orange yellow. Rêve d'Or is a deep yellow tree climber. Maréchal Niel ought to be mentioned, though it only succeeds well outdoors in favourable situations.

Among the Hybrid Perpetuals there are a few very good climbing varieties. One of the best is Glory of Cheshunt, which makes a fine pillar Rose and gives bright, vivid crimson blooms; the habit of growth is vigorous, and it is free flowering. Climbing Victor Verdier being of a very vigorous growth is an excellent pillar Rose, and produces bright cherry red blooms; Bessie Johnson, a tree growing sort, bluish white, is good, so also is Princess Louisa Victoria, of strong robust habit, bearing light silvery pink blooms. The Hybrid China Roses comprise some good kinds. The best are Blairi No. 2, bluish pink; Charles Lawson, deep rose; Madame Plantier, pure white; Vivid, crimson; and Coupe d'Hébé, waxy pink. All these are fine pillar Roses, and adapted for other forms of climbing. Tea Roses embrace some excellent kinds for climbing, and all beautiful. Reine Olga de Wurtemberg; this is a showy climbing Rose, rather loose growing, but of a brilliant red colour. Belle Lyonnaise, which is a seedling from Gloire de Dijon, may be relied upon as a variety of

A Galaxy of Roses.

ONE of the finest assemblages of Roses in a limited space that I have ever seen, was quite recently in the garden attached to the residence of Mr. W. Burrough Hill, Bannister's Hall, The Avenue, Southampton, and is a distinct proof of what may be done to beautify a garden, even to the extent of much magnificence, within a limited area. Fifteen years since Mr. Hill purchased the property of 3 acres situated at the south side of the public common, and facing what is now the County Cricket Ground. The Southampton Common is noted for its magnificent trees, Oak and Elm especially luxuriating here, which is a distinct proof that the soil is of a rich and holding nature, just the soil in which Roses luxuriate. From then until now Mr. Hill has yearly planted Roses, including new varieties as they appear, until the collection at the present moment numbers something like 3000 plants. The great charm in the planting is the fact that



LILIUM LOWI. (See Note on page 52.)

merit; it has deep coloured canary yellow blooms, large, full, tinged with salmon. Climbing Niphetos is pure white, like the ordinary variety, but of more vigorous habit. Perle des Jardins, an exceedingly good, yellow flowered climber for a south aspect. Gloire de Dijon is very hardy and perhaps the most popular climber grown; it does well everywhere and in any position; the buff orange flowers are freely produced. Reine Marie Henriette is commonly termed a Red Gloire, being similar to that variety in every way except colour and shape of buds, which are long pointed, deep carmine tint.

The Waltham Climbers, 1, 2, and 3, are of climbing habit, and have been raised as seedlings from Gloire de Dijon. They are crimson Roses of different shades. Of Bourbon Roses the best representative climber belonging to this class is Souvenir de la Malmaison. The climber must be distinguished from the non-climber of the same name and class. It produces fine foliage, and has large, pale bluish flowers. Climbing Roses are frequently seen not doing well owing to not receiving plenty of moisture and support at the roots. Rectify this, and a great change will come over them. They will send up clean and healthy growths, and eventually produce abundance of bloom. —E. D. S.

there is no formal design, the plants having been added whenever an opportunity afforded itself, amongst fruit trees, vegetables, flower borders, in fact everywhere. It is impossible to enumerate all the varieties, but a few illustrations may be of service to others in planting during the coming season.

Adjoining the public road is a thick neatly kept hedge of evergreen Privet; in this bays 3 feet wide are cut about every 8 feet. In the garden at the back of the hedge in each of these bays is planted a tall standard of Rose Ranunculoides, known here as the "Seven Sisters" Rose. The white, bluish tinted, thickly placed blossoms show to perfection with such a wealth of greenery underneath, and as the "heads" are free and flowing in growth they are quite informal. The 6 feet stock upon which the Rose was worked is evidently a Manetti. Behind these white-flowering standards are huge plants of Crimson Rambler, literally smothered with blossoms. Some of these single plants are fully 15 feet long, 12 feet high, and as they are trained flat their flowering area is considerable. The Yellow Rambler Aglaia, which is thought by so many persons to be shy in flower; here quite contradicts such a suggestion. Treated as Mr. Hill has it, it is one mass of its pale yellow flowers, quite altering my previous opinion

about the variety. A plant of Margaret Dickson, fully 8 feet high, quite informally trained, was bearing a huge crop of its handsome flowers.

In the kitchen garden there are several continuous arches, some 50 yards long, 10 feet high, quite a mass of blossom from one end to the other. W. A. Richardson, Rêve d'Or, Cheshunt Hybrid, Celine Forestier, and many others too numerous to mention, were rambling away in a huge tangle, all emitting a wealth of blossom with an excess of perfume. It was the freedom of growth, coupled with the enormity of flower, that led me to suggest to Mr. Hill, "Do you manure heavily?" "No," was the reply, "the soil is so good, a sandy loam on clay, that we do not suffer for want of moisture, and as the soil was so well prepared when laid, and so much added to then, that with such growth as you see I am afraid to manure now." When we see sucker-like shoots of Crimson Rambler push up from the base as thick as the thumb, and reach 12 feet high in one season, one cannot say manure is needed.—E. MOLYNEUX.

Book Notice.

Cyclopædia of American Horticulture.*

THE third of four volumes which is understood to comprise this magnificent and essential horticultural reference work has been issued by the Macmillan Company. Americans have received the publication as something which they had waited on, something to which they can now turn for instruction and guidance, and when in difficulty over plant names. We have discussed the scope and treatment of this Cyclopædia in foregoing volumes, and need not repeat ourselves. The compilation is comprehensive, and worthy of the leading position to which it has unanimously been accorded by our kinsmen "on the other side." Great Britain is not large enough to require, in any of our gardening dictionaries, a divisional treatment of its area; but the United States of America conjointly form a broad and expansive continent, necessitating a system of sectionising its extent into certain limited areas, so that the cultural operations and the products, being alike or nearly alike within such areas, can be written of in a summarised form. Thus the large State of Nebraska, with its nine pomological districts is separately treated of by an expert whose experience embraces all the variations of this region. In some cases a genus is contributed to by three or more authors, each especially versed in whatever line he conveys intelligence upon. Thus the modest *Nemophila* has the benefit of three exponents, one who describes the genus, and two who deal with the culture in different latitudes of the country. *Nepenthes* and other large and important genera receive the full attention they deserve, and numerous woodcuts and other illustrations are furnished. But the work will speak for itself wherever it goes; we fully recommend it.

A Mysterious Tree.—It is seldom in modern times one hears of something that cannot be explained, but in a forest of Adelsö, an island in Lake Mälär, in Sweden, is an old Fir tree stump, standing alone on high ground far from any dwelling. The forest round was cut down lately, but the stump remains, an object of superstitious reverence to the peasants on the island and the many woodcutters who come to work there in the winter. There are three holes in the stump, but in only one of them is treasure found. It is unknown, says "M. S." in "Country Life," for anyone to have visited the stump and found the hole quite empty. It is a fact known to all on the island that if the treasure is taken away there is sure to be more a few days after. The treasure is always copper money or small articles of jewellery. Do birds steal them and hide them in the hole? If so, where can they find such things? The peasants are never known to open their windows, and there is no village or market on the island, which measures only twelve miles by three miles. The writer visited the stump for the first time on October 30th, 1900, and found four pieces of money amongst the sawdust in the hole. On each of three visits during the winter she found coins. There were no footmarks, even of birds, in the snow which was lying deep round the stump. The peasants believe it is spirits who put things in the stump, the island being full of old grave mounds; it was a settlement of the tribes in very early times; an old ruined stone fort stands on the highest point. Many curiosities are constantly being found. Quite recently a woodcutter was felling a tree, which, falling over on one side, left half its roots standing out of the ground; on one of them glittered a golden arm band. The man received a large sum for it from the National Museum in Stockholm, where the jewel may now be seen.—M. S.

NOTES & NOTICES

Weather in London.—Thursday, the 11th inst., was a most trying day, even to those who enjoy heat. In the shade the temperature was 87°; while Friday was more stifling, though not so scorchingly hot. Saturday was fortunately cloudy, and much more agreeable, as was Sunday and also Monday. On Tuesday and Wednesday the sun was powerful on both days.

Appointments.—Mr. Galloway, who has been for the last two years general foreman at Gosford, has been appointed head gardener there, in succession to Mr. Thos. Cook. * * Mr. Alex. S. Galt, well known in connection with gardening journalism, has been appointed Instructor in Horticulture under the Berkshire County Council.

A Preventive of Mosquitoes.—If all the preventives for mosquitoes were effectual no one in all the wide world need be troubled with these dreadful little marauders. We hear that the Castor Oil plant has been found to be so distasteful to the mosquito that it will neither remain about the premises where the trees are planted nor in apartments where the cut branches, leaves, and seeds have been exposed. This fact is so well known in Egypt that it is a common sight to see the tree planted around a house in places where the mosquito is numerous. It is said that beneath the leaves of the *Ricinus* there is a poison that is fatal to the mosquito, but, curiously, even in rooms where the plant is kept, dead mosquitoes are not found.

Chiswick Gardens.—Even though the past month and a half has been excessively droughty in and around London, the crops in the Royal Horticultural Society's gardens at Chiswick have not been fresher or finer to appearance for a great number of years. Peas, Lettuces, and other trials were particularly noticeable in this respect. The Fruit and Vegetable Committee, indeed, were so well satisfied, and perhaps surprised, that when inspecting the trials of these two vegetables named above, they made a record in the trial book kept by Mr. S. T. Wright, which conveyed their pleasure at seeing such fine examples of culture. A new garden would appear, then, to be more than ever doomed, if such good results can still be obtained in the old acres at Chiswick. The question of a ball is actively engaging the minds of men in a certain quarter; we shall hear more of the matter in time.

American Pomological Society.—The details of the meeting of the American Pomological Society, which will be held in Buffalo, September 12th and 13th, 1901, are rapidly being perfected, and will soon be announced. The programme contains the names of a number of the most prominent horticulturists of the United States and Canada, and is particularly rich in topics of practical importance to fruit growers. Among the subjects already arranged for are the following, which we announce for their probable interest to many of our readers:—"A Comparison of Eastern and Pacific Coast Fruit Culture," by Prof. L. H. Bailey, Ithaca, N.Y. "Orchard Renovation," by J. H. Hale, South Glastonbury, Conn.; to be discussed by R. S. Eaton, Wolfville, Nova Scotia; W. T. Macoun, Ottawa, Canada, and others. "Quality and the Market," by C. W. Garfield, Grand Rapids, Mich.; to be discussed by S. D. Willard, Geneva, N.Y.; L. A. Goodman, Kansas City, Mo., and others. "Developments and Needs of the Export Trade in North American Fruits," by L. Wolverton, Grimsby, Ontario; to be discussed by Prof. Geo. T. Powell, Briarcliff Manor, N.Y.; H. M. Dunlap, Savoy, Ill.; Henry E. Dosch, Hillsdale, Ore., and others. "Fermentation of Fruit Juices by Control Methods," by Prof. Wm. B. Alwood, Blacksburg, Va. "Some Experiments in Orchard Treatment, and the Results," by Prof. F. M. Webster, Wooster, Ohio. "The Mango; Its Propagation and Culture," by Prof. E. Gale, Mangonia, Fla. "Loquat Culture," by C. P. Taft, Orange, Cal. "The Utilisation of Culls in Commercial Orchards," by Judge F. Wellbouse, Fairmount, Kans. One evening will be devoted to a joint session with the National Bee-keepers' Association, during which the following topics will be discussed: "Spraying Fruit Trees in Bloom," by Prof. S. A. Beach, Geneva, N.Y. "Bees as Fertilisers of Flowers," by Prof. James Fletcher, Ottawa, Canada. The discussion of these topics will be led by R. M. Kellogg, Three Rivers, Mich. Other topics will be announced later.

* "Cyclopædia of American Horticulture." By L. H. Bailey. N—Q. London: Macmillan & Co., Ltd. 21s. net.

Disease of the White Lily.—We would refer our readers to an interesting report on this subject by Dr. Cooke in the transactions of the R.H.S. Scientific Committee, and to the observations of the Rev. W. Wilks thereupon.

Popularity of Oranges and Lemons.—The popularity of these Citrus fruits is increasing year by year in the most regular manner. Ten years ago the value of the imported fruit came to £1,756,852. In 1895 it was £2,476,510, while last year it reached a very high point, representing £2,635,471. This total has never been exceeded in the whole history of the trade, with the exception of the year 1897, when the value was £2,677,070, the result of an extra plentiful crop.

Green Arsenoid (reports the "American Agriculturist") is a substitute for Paris green, applied in the same manner. It is more bulky than Paris green, and contains no acetic acid, and is not apt to burn the foliage. It can be used in solution or dry. It has been tested thoroughly by experts, and has the decided advantage over Paris green (1) in costing less, 7d. to 8d. per lb., and (2) in being a very finely pulverised powder, which remains easily in suspension when in water.

The Temple Rose Show.—We have much pleasure in announcing that the success of this exhibition has been such as to justify the new departure of the National Rose Society, and to rejoice the hearts of the finance sub-committee when taking stock at the end of the present year. "Well begun is half done," and considering the counter attractions upon July 4th last, it requires but a better arrangement of the date to put the new show upon a prosperous course and in an established position as an event of the year.

Flower Show.—Malahide and its surrounding districts have awakened to the practical effects which flow from a flower display, and on Saturday last inaugurated their first show. The day was all that could be desired, and the scene was the spacious grounds adjoining the Grand Hotel, where, during the afternoon, a band discoursed a pleasing selection of music. The floral exhibits, displayed in marquees, evidenced a high order of merit for cottage gardening. It is impossible to outline the various winners in their allotted classes. The following embrace the most active spirits in organising this display—Lord Talbot de Malahide, Mrs. A. Olpherts (Lisson Hall, Swords), Miss Hone (Basker Hill, Cloughran), and Rev. F. C. Hayes (Raheny). Their next meeting is dated for November, or a winter show, and the committee expect a goodly array of Chrysanthemums to be staged.

Flowers in Season.—Messrs. Kelway kindly forwarded a selection of handsome varieties of Delphiniums a few days ago. These displayed some very distinctive colours, and conveyed to our minds imaginative impressions of the lovely and attractive beds and borders that must be on view at the Langport Nurseries. Delphiniums add a feature of great beauty to the hardy herbaceous borders; the proper system of planting for the highest effect being not that of here a plant, there a plant, but well-massed groups. The best of Messrs. Kelway's novelties were Lord Chesham, with gentian-blue edge and maroon centre; Capt. Holford, light blue sepals with lilac-tinted petals; Dr. Mead, semi-double, ruddy-lilac tipped around the edge with gentian. Britain's Pride was very distinctive, of a remarkably bright sky-blue colour, ruddy inside, with creamy staminate petals. Ragged Robin is pale blue, and exceedingly graceful. Imperial Majesty, violet red, very good; and Capt. Lambton, ruddy violet inside, gentian outside. These are our selection of the best.

Variorum.—Mr. Prince says he has never known a season so favourable for the beautiful Roses he so ably cultivates. * * At Wrexham, a centre of the Strawberry picking industry, a local doctor asked the farmers to provide carbolic soap, and to insist on making the pickers wash themselves thoroughly before being allowed amongst the fruits. * * We have received a paper published in Adelaide and Melbourne, named "Garden and Field," in which Mr. Peter Barr, V.M.H., has an interesting article on how to distinguish the different classes or sections of the Daffodils and Narcissi. * * The London "Daily Express" is an enterprising newspaper. A year ago it equipped and sent an expedition to Patagonia, which expedition has now returned, bringing back remarkable zoological, ornithological, geological, and botanical collections, which will prove of great interest to scientists all over the world. Another expedition is being equipped. * * About fifty varieties of the finest French Cherries have been imported for trial at Maplehurst (Canada).

Royal Warrant.—Messrs. Wm. Wood & Sons, Ltd., have been appointed, by royal warrant, horticultural "specialists" to his Majesty the King.

Mr. G. B. Bracket, U.S. pomologist, has just been decorated, for conspicuous services at the Paris Exhibition, with the ribbon of the Order of Merite Agricole.

Are Flowers Unhealthy.—Certain superstitious or morbid faddists falsely prate about the harmful, air-vitiating properties of flowers in general, and a few in particular. Reasonable people would certainly not defend the use of Tuberose and Gardenias in close apartments, for their powerful odours are, indeed, not healthful. But to denounce odorous flowers in general for rooms proves a most unreasonable prejudice.

Excerpta.—So many freaks have appeared amongst Roses and Rose blooms this year, that it would be a worthy idea to have a class specially for these at some of our large Rose shows. * * Great credit is due to the City of London Corporation for the excellent way in which they have improved and laid out the flower beds in St. Paul's gardens this summer. The Postmen's Park in Aldersgate Street is a pleasant shady retreat. Opposite "the Bank" there are huge square flower tubs, admirably filled with plants at present all ablaze, with the dust and throng of city life all around.

Sussex Weather.—The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 1.64 inch; being 0.37 inch below the average. Total for the six months, 10.50 inches, which is 1.67 inch below the average. The heaviest fall was 0.47 inch on the 31st. Rain fell on nine days. The maximum temperature was 81° on the 9th, the minimum 38° on the 15th and 19th. Mean maximum, 72°; mean minimum, 47.29°. Mean temperature, 59.64°, which is 0.54° below the average. June has been variable, hot and cold, and stormy by turns, and dry throughout, with the wind sixteen days in the N. Thunder on 30th and 31st, which brought the much-needed rain, to the amount of 0.77 inch.—R. I.

June Weather at Belvoir Castle.—The wind was in a westerly direction fifteen days. The total rainfall was 1.61 inch. This fell on thirteen days, and is 0.51 inch below the average for the month; the greatest daily fall was 0.69 inch on the 30th. Barometer (corrected and reduced): highest reading, 30.447 inches on the 25th at 9 P.M.; lowest reading, 29.496 inches on the 13th at 9 P.M. Thermometers: highest in the shade, 77° on the 9th; lowest, 30° on the 19th; mean of daily maxima, 65.33°; mean of daily minima, 46.53°; mean temperature of the month, 55.93°; lowest on the grass, 27° on the 19th; highest in the sun, 129° on the 6th and 9th; mean temperature of the earth at 3 feet, 55.53°. Total sunshine, 218 hours 50 minutes, which is 37 hours 30 minutes above the average for the month; there were no sunless days. The frost on the 19th was the most severe that has occurred here in June since June 15th, 1892, when the thermometer on the grass went down to 24°, and that on the stand to 32°. Potatoes and Kidney Beans were severely cut in many places. Dahlias which had been growing in the open garden here for several weeks escaped unhurt, and tender bedding plants, such as Colens Verschaffelti, recently planted in the flower beds, were not injured.—W. H. DIVERS.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
July.										
Sunday .. 7	E.N.E.	deg. 60.7	deg. 56.7	deg. 67.0	deg. 57.0	Ins. —	deg. 65.8	deg. 62.7	deg. 57.8	deg. 56.1
Monday .. 8	E.N.E.	60.9	56.8	74.2	46.2	—	63.0	62.4	58.0	38.3
Tuesday .. 9	S.E.	63.1	57.0	77.4	45.5	—	63.5	61.9	58.2	37.9
Wed'sday 10	S.E.	65.7	60.8	81.5	49.5	—	64.0	62.1	58.2	42.2
Thursday 11	E.S.E.	69.9	64.5	85.8	56.3	—	66.8	62.5	58.2	49.6
Friday .. 12	S.E.	77.5	67.8	86.0	56.5	—	67.9	63.0	58.3	49.2
Saturday 13	N.E.	63.9	59.5	68.5	57.7	—	67.5	63.5	58.5	48.5
MEANS		66.0	60.4	77.2	52.7	Total —	65.5	62.6	58.2	46.0

The weather during the past week has been very hot and dry. The mean temperature for three days was 84.4°.

Netherhall, Cumberland.

THIS estate is situated close to the town of Maryport, and is the seat of Humphrey Pocklington Senhouse, Esq., Lord of the Manor of the town and port of Maryport. A great portion of the house is of very ancient date, but much alteration and restoration has been done since 1889 by the late Mrs. Elizabeth P. Senhouse and the present owner, her son. The house is of red sandstone. In the portico are over thirty Roman altars with inscriptions, besides seven or eight other plain ones, and several sepulchral and monumental stones, with two legionary stones, recording the presence here of a detachment of the 20th Legion. These have been taken from the Roman Station "Virosidium," which was near the town. The front hall has a mediæval appearance, with antique, carved, high-backed chairs; an ample fireplace, over which are the escutcheons of families who have intermarried with the Senhouses, and on the walls are portraits of the Senhouse and Lowther celebrities.

The family De Sewynhouse, or De Senhouse, derives from Walter de Sewynhouse, who had a grant of a one-fifth part of the township of Bolton, in the parish of Gosforth, from Alan de Copeland, and likewise a grant of other lands in the same parish, from William de Wyberthwaite. These grants are both without date, but were witnessed by Sir Adam de Lamplough, Knt., who lived in the time of Richard and John. From Walter descended John Senhouse, who married in 1528, Elizabeth, eldest sister and co-heir of Robert Eglesfield of Alneburgh Hall, now Netherhall, and he was High Sheriff of Cumberland. His son, John Senhouse of Ellenborough, is the person whom Camden mentions in his "Britannia" as having collected with great industry numerous Roman stones, altars, and statues, with inscriptions, which he placed with much taste in his houses and buildings, and as having entertained in 1599 the celebrated antiquarian himself and Sir Robert Cotton of Conington, with great civility.

Netherhall is surrounded by a small park and pleasure grounds, through which the River Ellen winds, and falls over a cascade close to the north front of the house. A very ancient Thorn tree is near the Hall, and it has assumed a decided weeping habit. There are large clumps of *Rhododendron ponticum* in the grounds, and some large Spanish Chestnuts, beside a fine Rose garden. Roses grow exceedingly well here. A small flower garden, with a commodious stone alcove, supported in front by five Ionic columns, is a chief feature. On the wall on one side of the flower garden, amongst other plants, are *Azara microphylla*, *Escallonia macrantha*, *Hydrangea paniculata* (a large plant), *Kerria japonica*, Clematises, and Roses; there is also a Water Lily pond.

The herbaceous borders (500 feet long by 12 feet wide) contain Hollyhocks, which are grown in hundreds, and do well here. Large clumps of *Lilium candidum* were noted, besides *Montbretia aurea* doing well; but Mr. Horne, the head gardener, lifts and replants the corms annually, setting them a few inches apart, and only selecting the best for this purpose. Herbaceous Phloxes, Pæonies, and early flowering Chrysanthemums are largely grown, while annually a 250 feet row of Sweet Peas is sown.

The kitchen garden, about 2 acres in extent, has walls which are covered with healthy fruit trees, and along the walks are finely shaped Apples and Pears planted by Mr. Horne within the last nine years. Border Carnations to the extent of 2000 plants are grown, the favourites being Raby Castle, Duchess of Fife, Mrs. Muir, Queen of Bedders, Nora, yellow; Lady Curzon, Lady Grey, and Mrs. Noel. Violets are well grown, and the variety Princess of Wales, both in pots and frames, was full of flower in early March; Neapolitan, Marie Louise, and Lady Hume were also seen in good condition. Downie's Best of All Cabbage Lettuce, which has stood the winter in a sheltered corner, in March had been transferred to a south border; Broccoli was also looking well.

The glass here is not extensive, but there is a considerable demand on its resources. There are nine houses, with a conservatory adjoining the house. Home-grown Freesias, which Mr. Horne does well, are never placed in much heat, and after flowering are set in a cool Peach house in full sun. They are watered and fed until the foliage dies away, and are then laid on their sides with the soil facing the south at the foot of a south wall until about August, when they are repotted, selecting the largest bulbs for flowering. On the roof of the conservatory there is a large plant of the climbing Niphetos Rose, from which over a thousand blooms were cut last year. It has been planted about five years. The only pruning done is to cut out weak wood, leaving intact all large, vigorous growths.

In the conservatory is a large plant of *Tecoma capensis*, which covers a considerable space and flowers freely. The other climbers are Ivy-leaved and scented-leaved Pelargoniums, *Plumbago capensis*, and *Lapageria rosea*. There are three vineries; one planted with Black Hamburg Vines, with Figs on the back wall, in restricted borders. Another vinery bears Muscat of Alexandria, Black Alicante,

and Trebbiano, with Smilax trained up strings on the back wall. The third vinery has Black Hamburg and Buckland Sweetwater alternately. About 150 healthy Tomatoes, in 3-inch pots, were seen, and about 120 Tea Roses in numerous varieties. Three hundred Royal Sovereign Strawberries are forced at Netherhall; and 150 hybrid Amaryllis, many of which were throwing up spikes. Amongst the many forced things are *Hydrangea paniculata*, *Acer Negundo variegata*, *Spireas*, Lily of the Valley, double yellow Daffodils, *Deutzia gracilis*, and two large *Hydrangea hortensis* in tubs. About 300 robust young plants of Malmaison Carnations are grown. In one house several trees of Alexandria were in flower; 400 Chrysanthemums for pots are cultivated, and healthy stuff in 3-inch pots were observed, whilst many are struck at the end of April for flowering in 6-inch pots. Single Chrysanthemums are favourites for cutting, and about fifty are grown. The varieties are Ewen Cameron, Milly Agate, King of Siam, and Mary Anderson.—F. STREET.

Societies.

Royal Horticultural—Scientific Committee, July 2nd.

Present: Dr. M. T. Masters (in the chair); Messrs. Odell, Chapman, Saunders, Holmes, Bowles, Druery, and Worsdell; Drs. Müller, Cooke, and Rendle; Prof. Boulger, Rev. W. Wilks, and Rev. G. Henslow, Hon. Sec.

Orchids malformed.—Dr. Masters reported on the flowers sent to the last meeting. He found the *Cattleya* to be dimerous, and the *Odontoglossum* to have five perfect stamens, the other parts being twisted, &c.

Hartstongue, abnormal form.—Mr. Druery exhibited a plant with the fronds variously modified, being sub-hastate, emarginate, sub-pinnate in places, and much crested. It was a seedling of doubtful origin; but a similar plant had been found wild many years ago.

Aristolochia trilobata.—Mr. Odell showed flowering shoots of this species, remarkable for the form of the flower, in that the calyx closely resembled a pitcher of *Nepenthes*, having a lid provided with a long pendulous streamer.

Cheiranthus alpinus, pods proliferous.—He also showed specimens of this not uncommon monstrosity in certain Cruciferae. The pods were swollen at one place, within which was a double flower having several crumpled yellow petals and abortive stamens in the place of an ovule.

Silene and Anthyllis.—Mr. Holmes found that the specimens sent to the last meeting proved to be *S. hirsuta*, and a variety of *A. vulneraria*.

Campanula fasciated.—Mr. Holmes exhibited a large terminal flower of the common Canterbury Bell. It consisted of a "multifold" flower of numerous parts; also a flower of *Paris quadrifolia*, with six leaves to the whorl, but having the usual 4-merous perianth.

Plymouth Strawberry.—Mr. Holmes also brought specimens of the "Plymouth Strawberry," which he has had growing for ten years. It is remarkable for having a foliaceous flower, the petals and stamens being represented by numerous small leaves, as in the green Rose and Alpine Strawberry; while each carpel on the receptacle consists of a three-pointed leaf, or rather petiole, rolled up upon itself. There is no trace of an ovule within it.

Beech with palmately-nerved leaves.—He also showed specimens of this peculiarity, apparently due to some insect attack. Mr. Saunders undertook to examine it.

Proliferous cones of Cryptomeria.—Mr. Worsdell brought specimens of this monstrosity, which Dr. Masters observed was not an uncommon production in that tree.

White Lily diseased.—Dr. Rendle showed stems badly attacked by a fungus. Dr. M. C. Cooke reports as follows upon it:—"It may be reasonably assumed that the Lilies exhibited were suffering from the attack of the 'Lily disease,' so called by Marshall Ward in his memoir (in the 'Annals of Botany,' vol. ii., page 319, pl. xxii. to xxiv. 1889). This is stated to be due to a white mould, of the genus *Botrytis*. Most of the species being only a conidial stage of a trumpet-shaped fleshy fungus called a *Peziza* in past times, but now dignified by the name of *Sclerotinia*, because the cups are developed from a hard sclerotium, which is the hibernating mycelium of the mould. In the present instance I am not aware that the sclerotium has been observed, and certainly not the *Peziza*; hence it would be rather premature to give the supposed *Peziza* a name before its existence has been demonstrated. Moreover, Marshall Ward has not given a specific name to his *Botrytis*, although he has described it with its clusters of egg-shaped conidia. Berkeley described, in 1881, a species of white mould growing on Lilies, which he called *Ovularia elliptica*, from its elliptical conidia ('Gardeners' Chronicle,' Sept. 10th, 1881, fig. 66). This nevertheless is a species of *Botrytis*, since called *Botrytis elliptica*, and probably is Marshall Ward's species. Long previous to the above, Corda figured and described a white mould, with ovate conidia, in glomerules, which was found growing on immature fruits of Lilies in Bohemia; afterwards cited in other parts of Europe. This mould he called *Polyactis cana*,

bnt during the recent revision of all species of fungi, by Saccardo, it has been called *Botrytis canescens*. Whether it is different from *Botrytis elliptica* I cannot say. Another species of *Botrytis* has been found in Britain and Holland, on leaves, stems, and flowers of cultivated Tulips. It is called *Botrytis parasitica* ('Cavara App. Pat. Veg.,' 10, tab. vi., figs. 1 to 4). This is probably different from the *Botrytis* on Lilies, although it is not improbable that it might develop upon Lilies if it came in contact with them. Having in view the conference which is shortly to take place, it may be interesting to allude to all the fungoid diseases of Lilies which have come under my notice; and, in this connection, it is satisfactory to learn that the number of pests is below the average of plants so largely cultivated. No other parasitic mould has been recorded, and, only recently, one species of *Mucor* which attacks Lily bulbs raised in Japan for exportation to Europe. This species is *Rhizopus necans*, described by Massee ('Kew Bulletin,' 1897, page 87, with plate), and attacks the bulbs, which soon

by incomplete fungi, called the *Sphærospideæ*. Here, again, the British cultivator may congratulate himself, since *Phyllosticta lilicola*, on the leaves of *Lilium candidum*, has not extended beyond Italy; and *Phyllosticta lilii* on *Lilium superbum*, is at present confined to Canada. There is an allied parasite, with some technical difference, called *Cylindrosporium inconspicuum*, found on leaves of the Martagon Lily, but at present confined to Switzerland. Altogether this report should give courage to the English cultivator of Lilies, inasmuch as the 'Lily Disease,' so called, associated with *Botrytis*, is the only one which need cause anxiety." Mr. Wilks observed that the best remedy was to place the diseased Lily bulbs in a bag of sulphur in some hot place in a greenhouse; then to replace them in the ground, but not too deeply. A unanimous vote of thanks was given to Dr. Cooke for his report on the fungns sent to the last meeting, as well as on the present occasion.

Lily hybrids.—Mr. Bowles exhibited blossoms of *L. Dalhansonii*, the result of *L. dalmaticum* × *Hansonii*, to show the difference in colouring.



NETHERHALL, CUMBERLAND.

become rotten and exhibit clusters of tiny filaments with black heads, like miniature pins. These heads enclose minute conidia, whilst resting spores or zygospores are produced within the tissues of the decayed bulbs, and thus perpetuate the species after a period of rest. The section of fungoid parasites which include the smuts, rusts, and brands is represented, although there is no smut such as infests *Erythronium* or *Ornithogalum*. The cluster cups of the Lily of the Valley (*Æcidium convallariæ*), has occurred on *Lilium canadense*, and another cluster cup (*Æcidium Safianoffianum*) occurs on Martagon Lilies in Siberia. Of the brands with simple teliospores consisting of a single cell, the most common is *Uromyces Erythroni* on *Lilium canadense*, in Europe; and another, less common, probably unknown in Europe, is *Uromyces Lilii*, described as a pest of Lilies in the United States. To these must be added the brands with two-celled teliospores, although I am not aware that *Puccinia liliacearum*, notwithstanding its name, has been found to attack Lilies, although it is known in Britain on *Gagea* and *Ornithogalum*. Two other species, *Puccinia Tulipæ* and *Puccinia fallaciosa*, attack Tulips, so that on the whole, the Lilies are favoured by almost immunity from these forms of fungoid pests. The last group or section of parasites to which I need allude are the leaf-spots caused

Hybrid Passion Flowers.—Dr. Masters undertook to report on some examples received from Dr. J. H. Wilson, St. Andrews.

Tuberose diseased.—He also brought some specimens received from Mr. C. Maers, Hockley, Essex, upon which Dr. Cooke reports as follows:—"In the decayed crown of the corm I find no mycelium, or evidence that the decay was caused in the first instance by fungi; but plenty of insects were present." Dr. Masters observed that such decay was usually at the base, not the apex, of the corm, as in the present instance.

Carnations diseased.—Mr. G. Roberts of Exton Park sent some plants which were in a failing condition. Dr. Cooke examined them, and reports as follows:—"The Carnations evidently suffered in the first instance from worm at the roots; afterwards, when the foliage was failing, they became attacked by the Carnation mould (*Heterosporium echinulatum*, figured in 'Gard. Chron.,' August 21st, 1886, fig. 50). It is doubtful whether these particular black moulds will attack healthy and vigorous plants; but when they are weak, sickly, or injured, they then become a ready prey."

Apple-stems attacked by caterpillars.—Specimens were sent by Mr. W. Camm of Abbey Gardens, Battle, Sussex, upon which Mr. Saunders

reports as follows:—"The Apple-stems from Mr. Camm are, I should say, undoubtedly bored by the caterpillars of the 'wood leopard moth' (*Zeuzera æsculi*). The entrance to the gallery may be easily found by examining the tree, and if moisture is seen to be exuding from any part mixed with sawdust-like particles of wood, there the hole will be found; a sharp-pointed wire should then be passed in as far as possible, so as to stab the caterpillar. If this cannot be accomplished, the entrance should be somewhat enlarged, and some tow or cotton-wool steeped in tar or paraffin oil should be pushed in as far as possible so as to stifle the insect. When no more can be got in, the entrance should be closed tightly with well-kneaded clay or wax. If a large grey and white moth with delicately spotted wings is found on the trees, it should be killed, as it is probably the parent insect."

Palms flowering.—Mr. A. Doig, 36, Alleyn Road, Dulwich, sent a portion of the male inflorescence of *Chamærops Fortunei*. The plant is described as being some 4 feet high to the top of the crown. Another plant has flowered at Chislehurst this season, and a third elsewhere. Lastly, a fourth has flowered after an interval of twenty-seven years. This summer has therefore appeared to be particularly favourable to the flowering of Palms in the open.

Plants from Asia Minor.—Miss Wilmot sent specimens of a white-flowered Larkspur and a golden-yellow *Centaurea*, both of which appear to be new to science, and at present unnamed.

Lavender failing.—Plants were received from Mr. A. H. Smee which failed to produce their flower spikes. The stems were remarkable for the large size and flat form of the leaves; the leaves on the lower part being small, and with ciliated margins. This feature appeared to show that the plants had grown in too moist a locality, the vegetative vigour being abnormally stimulated; this, and possibly a frost, had arrested the flower spikes.

Lilium Conference, Chiswick, July 16th and 17th.

Under the auspices of the Royal Horticultural Society an important conference, to study and consider the genus *Lilium*, was held on Tuesday and Wednesday, July 16th and 17th, in the Society's gardens at Chiswick. The meeting, or exhibition rather, was by no means devoted to *Liliums*, and indeed these were conspicuously scarce. The only extensive group was that set up by Messrs. Wallace & Co. Another fair collection came from Messrs. Veitch; otherwise the show in the Great Vinery was similar to what one sees any fortnight at the Drill Hall. There was no attempt at grouping the sub-genera of *Liliums*, though, of course, these were discussed by Mr. Baker at the conference proper. This started at two o'clock, but before that, a party of about two hundred sat down to luncheon, Sir Trevor Lawrence, Bart., being in the chair. The loyal toasts were proposed, and one also for the committees, which was ably responded to by Mr. Alex. Dean. We give below a report of the show, but our *résumé* of some of the papers read has had to be held until next week.

Fruit and Vegetable Committee.

Present: Alex. Dean, Esq. (in the chair); with Messrs. W. Wilks, F. Q. Lane, Geo. Wythes, G. Miles, S. Mortimer, Wm. Pope, James H. Veitch, Geo. Kelf, E. Beckett, W. Fife, Thos. Coomber, John Basham, H. Markham, J. Willard, H. Balderson, James Smith, Geo. Woodward, Henry Esling, W. Poupert, J. W. Bates, C. Herrin, and W. H. Divers.

Mr. A. Pettigrew, The Gardens, Cardiff Castle, Cardiff, staged four immense and handsome samples of Royalty Melon, which received an award of merit last year.

Five handsome baskets filled with Melons were exhibited from the Horticultural College, Swanley. The varieties included Invincible, huge fruits; Conqueror, finely rounded and smooth; Eureka, two good fruits; and a seedling cross between Best of All and Hero of Lockinge.

Miss Adamson's gardener, Mr. George Kelf, sent a collection of fruit from South Villa, Regent's Park. His dishes included a dozen handsome fruits of Golden Jubilee Tomato, Ringleader, Frogmore Scarlet, Hero of Lockinge, and Al Melons, the Frogmore especially fine; and the following Gooseberries—Queen of Trumps, Peru, Lord Derby, Queen of the West, Admiral Boxer, Bollin Hall, Alma, Overall, Lofty, Succeed, Pretty Boy, Progress, and Lizard. The bulk of these were ready for consumption. Two dishes of Red Currants were staged, besides sixteen handsome Peaches, and a selected box of Superlative Raspberry.

Lord Llangattock (gardener, Mr. T. Coomber), The Hendre, Monmouth, sent eighteen exceedingly handsome Queen Pine Apples, large, even, odorous—a highly creditable display, and becoming quite a rarity. A dish of Red Currants came from F. Bexley, Esq., 170, Strand, London.

A set of four monster Pine Apples were staged from Baron N. de Rothschild (whose gardener is Mr. Roberts), Hohe Warte, Vienna. The varieties were The Queen and Brackamoriensis. One of The Queen weighed 6½ lbs.

From Messrs. Ray & Co., Teynham, Kent, came an assortment of Cherries, marvels of beauty all of them. Here was Noble, that splendid dark sort; Bigarreau Napoleon, Governor Wood, Turkey Heart, shown in bunches on the cut shoots; Waterloo Heart, Amber Heart, Webbs' Black Heart, Florence, Frogmore Bigarreau, and a few others. The exhibit included nineteen dishes and five clusters.

Messrs. Bunyard & Co., The Royal Nurseries, Maidstone, staged sample shoots of Cherries laden with fruits, to show the productiveness of these in this present season. We believe Messrs. Bunyard grow their trees in grass, and keep sheep fed upon the pasture. No doubt this has a very telling effect from a manurial point of view. The varieties were Black Eagle, Flemish Red, Old Black Heart, Kent Bigarreau, and Waterloo Heart.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. R. Wilson-Ker, J. Fraser, J. Jainet, R. Dean, S. A. de Graaff, E. H. Jenkins, W. P. Thomson, W. Bain, J. Jennings, C. R. Fielder, Chas. E. Pearson, C. Dixon, C. E. Shea, Chas. T. Drury, Geo. Paul, Harry Turner, R. C. Notcutt, James Walker, and George Gordon.

From Messrs. Jas. Veitch & Sons, Ltd., Chelsea, came a beautiful display of cut *Liliums*. The back was formed entirely of *Lilium longiflorum*, grand clean blooms; *L. excelsum*, *L. dalmaticum*, *L. Martagon*, *L. superbum*, and *L. Humboldti ocellatum* were also in strong evidence, while such species and varieties as *L. concolor*, *L. elegans fulgens*, *L. Browni*, *L. croceum*, *L. pardalinum*, *L. chalcedonicum Heldreichi*, *L. Washingtonianum* were all well represented; while *L. Krameri*, *L. Hansoni*, and *L. canadense flavum* completed a noteworthy exhibit.

Mr. Amos Perry, Hardy Plant Farm, Winchmore Hill, staged one of his collections of hardy flowers, which have become so famous. The arrangement left little to be desired. Some of the best subjects were *Lilium elegans*, *L. elegans atro-sanguineum maculatum*, *L. Humboldti*, and *canadense*. The Japanese Irises were also a conspicuous feature, good bunches of *Gentiana cruciata*, *Delphinium grandiflorum plenum*, *Aster Thompsoni*, *Heuchera sanguinea*, *Eryngium spina alba*, and *Lathyrus latifolius delicatus* were also staged, while the free use of *Gypsophila* and *Statice* between the vases had a most pleasing effect. Mention must also be made of a good representative collection of Water Lilies nicely displayed.

Hardy flowers were also staged by Messrs. T. S. Ware, Ltd., Feltham, who had a well-arranged collection, which comprised good bunches of *Phloxes*, *Gaillardias*, *Liliums*, *Pentstemons*, and good bunches of *Erigeron speciosus superbum*, *Heliopsis B. Ladhams*, *Statice speciosus*, *Scabiosa canescens*, *Carnations* in variety, and *Calopogon pulchellus*, amongst many other things, the whole forming a pleasing display.

Mr. John Russell, Richmond Nurseries, Richmond, contributed a glorious bank of foliage plants which were much admired. *Crotons* figured largely, and included well coloured plants of *C. Hammondii*, *C. Domei*, Mrs. Swan, *C. Cronstadtii*, Earl of Derby, *C. Andreanum*, *C. superbum*, and *C. Thomsoni*. *Alocasias*, too, were well represented by *A. argyrea*, *A. gandavense*, *A. Montfortinense*, *A. Sanderiana*, and *A. Martin Cahuzac*. *Dracenas* were also much in evidence, especially *D. Russelliana*, while the rest of the display was made up of *Caladoms*, *Aralias*, and *Asparagus*.

At the entrance of the vinery, Messrs. W. Fromow & Sons, Chiswick, arranged a fine group of Japanese Maples, dotted throughout with *Liliums*, while a capital edging was formed with the variegated *Aralia pentaphylla*. The arrangement was decidedly good, and a pleasing diversion to the rest of the exhibits.

A small group of *Pelargonium Kilmeny* came from Mr. E. Landlaw Roker Nursery, Sunderland, which was said to be a sport from *Madame Thibaut*, the flowers were pure white, and the variety certainly possesses the same habit as the parent.

Messrs. Barr & Sons, Covent Garden, staged a good table of hardy flowers, the *Liliums* forming the chief feature. These included good examples of *L. pardalinum Michauxii*, *L. longiflorum*, *L. Browni*, *L. Roezli*, *L. Thunbergianum*, Willie Barr, *L. T. Crimson Beauty*, *L. T. sanguineum*, and *L. canadense rubrum*; while the display of *Phloxes*, *Lychnis chalcedonica*, *Veronica longifolia rosea*, *Centaurea dealbata*, *Alströmmeria aurea*, *Pentstemons*, and a good collection of *Delphiniums* were excellent. Mention must also be made of the collection of *Nymphæas* exhibited in bowls; they included *N. Gladstoniana*, *N. sanguineum*, *N. Wm. Dooge*, and *N. Marlacea rosea*.

Mr. Percy Waterer, Fawkham, Kent, arranged a glorious display of Sweet Peas; the centre was formed with a huge basket of *Triumph*, with *Fern* and *Gypsophila*, while two large centrepieces were used on either flank, one formed with *Blanche Burpee* and *Lovely*, the other with *Black Knight* and *Miss Wilmott*. The rest of the table was filled with vases of *Salopian*, *Prima Donna*, *Emily Eckford*, *Oriental*, *Golden Gate*, *Chancellor*, *America*, *Prince of Wales*, *Begorra* (surely Irish), *Mars*, *Countess of Powis*, and *Lady Frisel Hamilton*; each bunch was undoubtedly developed for all it was worth, and it is doubtful if finer individual blooms have ever been seen.

The feature of the show was without a doubt the grand collection of *Liliums* in pots, arranged by Messrs. R. Wallace & Co., Colchester. The groups included splendid masses of *Henryi*, *L. anatum*, *L. a. Wittei*, *L. a. rubro-vittatum*, *L. speciosum album*, *L. s. rubrum*, *L. Browni*, *L. longiflorum*, *L. candidum*, *L. excelsum*, *L. Burbanki*, and *L. concolor*, while the collection in a cut state were equally comprehensive, and included large vases of *L. concolor* var. *Coridion*, *L. Thunbergianum bicolor*, *L. T. E. S. Joerg*, *L. pardalinum californicum*, *L. croceum*, *L. T. Orange Queen*, and *L. Tottenhami*, the whole making a grand display.

Messrs. Jas. Veitch & Sons, L'd., also staged a few good plants of *Nerium rosea splendens*. They were growing in 5-inch pots, and were well flowered; also a basket of *Buddleia variabilis*, a pretty form, beautifully scented.

A collection of Carnations came from Mr. Jas. Douglas, Great Bookham, which were very fine. Some of the best were *Fredrici*, *Queen of Sheba*, *Agnes Sorrel*, a grand dark variety, beautifully perfumed; *Miss Violet*, *Trojan*, *Cecilia*, *Dalgetty*, *Lady St. Oswald*, *Ensign*, a fine white; *Sappho*, Mrs. Chas. Baring, and *Henry Falkland*.

Major Rossiter, High Road, Chiswick, exhibited three baskets of flowers, tastefully arranged. Sweet Peas, Carnations, and Roses were chiefly used, with a judicious amount of *Asparagus* and *Fern*.

Orchid Committee.

Present: H. J. Veitch, Esq. (in the chair); with Messrs. W. H. Young, James O'Brien, H. T. Pitt, A. Hislop, E. Hill, de B. Crawshay, T. W. Bond, W. Thompson, and H. J. Chapman.

Anguloa Ruckeri, with six massive flowers, came from E. Roberts, Esq. (gardener, Mr. W. Carr), Park Lodge, Eltham. From de Barri Crawshay, Esq., came *Odontoglossum* × *Crayshayanum*, which received an award of merit. From Messrs. Hugh Low & Co., Bush Hill Park, Middlesex, came *Cypripedium* *Fran Ida Brandt*, with tall and handsome flowers; also *C. Lawrenceano-Charlesworthi*, with pretty mauve-violet standards and chocolate-brown pouch and petals. They also staged *Laelia Iona*, good; and *Cypripedium Kimballianum*, Low's var. This is, perhaps, the handsomest of all *Cypripediums*; it is a natural hybrid, and received an award of merit. Sir F. Wigan, Bart., also staged a few plants.

Medals Awarded.

Gold medal to Messrs. Wallis & Co., Colchester, for Lilies. Silver-gilt Flora to Messrs. J. Veitch & Sons, Chelsea, for hardy *Nymphæas* and cut Lilies; to Mr. Percy Waterer, Fawkhams, for Sweet Peas. Silver Flora to Mr. J. Russell, Richmond, for stove and greenhouse plants. Silver-gilt Banksian to Mr. Amos Perry, Winchmore Hill, for hardy flowers. Silver Banksian to Messrs. Barr & Sons, Covent Garden, for hardy flowers; to Messrs. Ware & Co., Feltham, Middlesex, for hardy flowers; to Messrs. Fromow & Sons, Chiswick, for Japanese Maples and Lilies; to Messrs. Ray & Co. for collection of Cherries; to Baron de Rothschild (gardener, Mr. Roberts), Vienna. Silver Knightian to Lord Llangattock for collection of Pine Apples; to Miss Adamson (gardener, Mr. G. Kelf) for collection of fruit.

Certificates and Awards of Merit.

Arctotis grandis (A. W. Wade).—The ray florets of this herbaceous flower are long and narrow, the colour is white faintly tinged blush; the disc is mauve (award of merit).

Campanula lactiflora cærulea (A. Perry).—A well-known handsome *Campanula*; the tall branching plant produces an immense number of pale blue flowers (award of merit).

Carnation Ensign (J. Douglas).—A splendid white self with very broad smooth petals (award of merit).

Carnation Seymour Corcoran (J. Douglas).—A deep yellow self with very fine petals and a non-splitting calyx (award of merit).

Cypripedium Kimballianum Low's variety (H. Low & Co.).—A very handsome form; the oval-shaped dorsal sepal is very large, the colour is cream tinged green, with pronounced brown lines; the long petals are green at the base, and tinged rose at the tips, and almost wholly covered with large crimson brown spots; the pouch is greenish claret (award of merit).

Odontoglossum Crawshayanum (de Barri Crawshay).—This is a hybrid between *Halli* and *Harryanum*; the flower is very handsome; the basal colour of yellowish green is almost obscured by the brown blotches and bars; the superb lip is lemon yellow with crimson-brown spots towards the base (award of merit).

Odontoglossum maculatum Thompson's variety (W. Stevens).—A superb variety; the very large flowers are of perfect form; the sepals a pale brown, and the very broad petals pure yellow with brown at the base; the beautiful lip is pure yellow spotted with brown (first-class certificate).

Lilium Burbankii (R. Wallace & Co., G. S. Patey, Amos Perry, and W. Bain).—An effective Lily, with tall branching spike. The colour is pure yellow, with crimson towards the tips; there are profuse blackish spots (award of merit).

Lilium concolor Coridion (R. Wallace & Co.).—A chaste little *Lilium*. The flowers are rich yellow, with small crimson spots (award of merit).

Diss, July 9th.

It was pleasant to find that this little show has recovered from the loss of Mr. F. Page Roberts, and under the agreeable management of Mr. F. J. Burrage prospers, so that in all departments there were 100 more entries than there were last year. The show was held at Hall Hills, and there was serious competition in only one of the three principal Rose classes. In the open class, for thirty-six, Mr. Frank Cant was the only exhibitor; he had some fair H.P.'s for the season, such as *A. K. Williams* and *Duke of Connaught*, and a good *Bessie Brown*. For the Frère cup, twenty-four Roses, amateurs, Mr. Orpen could not be persuaded to come, so Mr. Foster-Melliar was first, having good samples of *Bessie Brown*, *Duke of Wellington*, and *Maman Cochet*; Rev. J. H. White was second, and Rev. J. N. Fellowes a creditable third. Mr. Foster-Melliar has now won the cup six times and Mr. Orpen five. The class for twelve Teas is an open one, and Mr. Foster-Melliar was much pleased to see himself placed first and Mr. Frank Cant second. It was not a case in which there could be any doubt, and the winning stand was a really fine one, having as its best blooms *Maman Cochet*, *Cleopatra*, *Comtesse de Nadaillac*, and Mrs. E. Mawley. Mr. F. Cant's box contained smaller flowers, among which was a good *White Maman Cochet*; Mr. Hammond was third, and also first in a minor class with six good Roses. The best H.P., amateurs, was a very good *Her Majesty* in a small class, *Bessie Brown* being excluded by the wording; and the best Tea Mr. Foster-Melliar's *Maman Cochet*, large, smooth, and clean. May the Diss Show flourish, if only for the sake of old memories.

Wolverhampton, July 9th, 10th, and 11th.

(Continued from page 42.)

SUPPLEMENTARY to the short notice contained in last week's issue of the Journal, and in which slight reference was made to one or two classes of the Roses, special mention may be given of the class for twelve Roses, of distinctly named new varieties of '98, '99, and 1900. The first prize was a gold medal, value £3, and cash £2; second, £1 10s.; third, 15s. The coveted premier award was secured by Messrs. A. Dickson & Son, Belfast, with excellent blooms of such as *Ulster*, *Bessie Brown*, Mrs. Edward Mawley, *Bertha Gameny*, *Exquisite*, *Lady Clanmorris*, *Madame Eugène Boulet*, *Amateur Teyssier*, Mrs. W. F. Sandford, *Daisy*, and *Liberty*. Another interesting and attractive class was that of twelve bunches of Roses, with buds and foliage as cut from the plants. The first prize was adjudged to Mr. John Mattock, Oxford, for an exceedingly well staged arrangement, consisting of *Perle des Jardins*, *Crimson Rambler*, *Papa Gontier*, *Anna Olivier*, *lucida plena*, *Maman Cochet*, *Comtesse de Nadaillac*, *Ethel Brownlow*, *Marie Van Houtte*, *Bardou Job*, *The Bride*, and *Souvenir de Catherine Guillot*. The second prize was accorded Messrs. Harkness & Sons, with also an excellent stand, while Messrs. Gunn & Sons were placed third. Messrs. Perkins and Son's twelve blooms of *Her Majesty* could hardly be more perfectly shown. The second prize box of *Bessie Brown*, shown by Mr. Hugh Dickson, Belfast, was also remarkable for high quality.

Collections of hardy border flowers were a strong feature, and the gold medal was deservedly bestowed upon Messrs. Gunn & Sons, Birmingham, the second and third prizes going to Messrs. R. Wallace and Co., Colchester, and Messrs. Harkness & Sons respectively. For a display of plants or floral arrangements, fruits and vegetables permitted, staged in a space not to exceed 200 square feet, the Wolverhampton silver challenge trophy, value £35, and cash £5, was secured by Mr. Joseph H. White (winner last year), Worcester. The second prize, £5, fell to Mr. J. E. Knight, Wolverhampton; and the third, £3, to Messrs. Jones & Sons, Shrewsbury. For an arrangement of Sweet Peas the gold medal was awarded to Messrs. Gunn & Sons, and the silver medal to Messrs. Jones & Sons.

Fruit.—Considering the comparative earliness of the season fruits are invariably shown in goodly number, and for a collection of eight dishes Mr. J. H. Goodacre, Elvaston Castle Gardens, Derby, was adjudged the first prize (£10). It consisted of three full bunches of fine and well coloured *Black Hamburgh Grapes*; three of *Canon Hall Muscat*, very green and open to considerable adverse comment; a dish of exceedingly fine and highly coloured *Lady Sudeley Apples*, *Royal George Peaches*, *Violette Hâtive Nectarines*, *Brown Turkey Figs*, and a fine *Sutton's Al Melon*. The second honour fell to Mr. T. Bannerman, and the third prize was given to Mr. J. Read, gardener to the Earl of Carnarvon. For a dish of Peaches the first prize fell to Mr. T. Bannerman with highly coloured and large fruits of *Royal George*. *Nectarines* were also very well exhibited, the first prize falling to fine fruits of *Lord Napier*; the second to Mr. J. Read, for *Pineapple*, and the third to Mr. T. Bannerman. *Melons* were very well represented, and the first prize for a green or white-fleshed variety fell to Mr. F. Jordan, with an unnamed seedling, somewhat small in size; Mr. S. Bremmell was placed second with *Royal Jubilee*.

Vegetables.—In competition for the prize offered by Messrs. Sutton and Sons for the best collection of six distinct kinds, Mr. James Gibson, gardener to R. W. Hudson, Esq., annexed the first prize with medium-sized specimens of excellent quality, including *White Leviathan Onions*, *Early Giant Cauliflowers*, *Favourite Carrot*, *Ideal Potatoes*, *Eclipse Tomato*, and *Duke of Albany Peas*; the second prize going to Mr. J. Read, and the third to Mr. W. L. Bastin. In competition for Messrs. Webb & Sons' prizes for six distinct kinds Mr. W. L. Bastin secured

the first honours with fine examples of Monster White Onions, Viceroy Tomatoes, Stourbridge Marrow Peas, Express Potatoes, Peerless Cauliflowers, and New Standard Carrots, the second prize going to Mr. J. Read, and the third to Mr. H. Wright, gardener to W. Watson, Esq., Kingswinford. For a collection of six varieties, Pines excluded, Mr. T. Bannerman was to the fore with Black Hamburg and Muscat of Alexandria Grapes, Trentham Hybrid Melon, Brown Turkey Figs, Royal George Peaches, and Violette Hâtive Nectarines. The second prize to Mr. F. Jordan, with Gros Maroc and Foster's Seedling Grapes, Lord Napier Neotarines, fine; Waterloo Strawberries, Hale's Early Peaches, and a finely netted yellow-skinned Melon; the third prize falling to Mr. Goodacre. Space will not allow of further particulars of the other numerous exhibits in this grand show.

Beckenham Horticultural, July 10th.

The tenth summer show of flowers, fruit, and vegetables, and floral fête was held in the Recreation Grounds, Croydon Road, Beckenham, on Wednesday, July 10th. A lunch was provided at one o'clock, and after 1.30 the show was formally opened by Sir Henry and Lady Lennard, following which there was an interesting cycle gymkhana by ladies, including fancy rides and competitive events. Music was supplied by the band of his Majesty's Royal Irish Guards, and musical drill was performed by two companies of the Royal Hospital School, Greenwich, in the evening, at which time also the grounds were illuminated by thousands of coloured lamps. We mention these facts to show how much the committee and hon. secretaries (Messrs. G. R. Stillwell and G. H. Davis) have attempted, so that the event might be made a success. Though the flower show and horticultural productions are half-shadowed by so many other attractions, yet, after all, these are the backbone of such fêtes, and the competitors are probably incited to their very best efforts, knowing that many eyes will view their entries, whereas, without extraneous attractions, the visiting public would be confined to zealots or real flower lovers.

The non-competitive section was well represented, and on this occasion several new firms sent contributions. This portion greatly enhanced the success of the show. The wide expanse of canvas at the committee's disposal allowed this collection to be set out at the best advantage. In the open section the groups of plants were as usual an attractive feature. In the first class for group of plants, 10 feet by 5 feet, Mr. H. W. Redden, gardener to Mr. G. W. Bird, Manor House, West Wickham, secured first prize with a delicately arranged collection in which Orchids were the principal blooms. Mr. Redden was very successful in other departments of the show, and he carried off the silver medal of the R.H.S., awarded to the exhibit in the section displaying the highest cultural skill. The second prizetaker for the large groups was Mr. E. Hawkins, gardener to Mr. C. Aubrey Smith, Parklands, Crystal Palace Park Road. In the second class for four plants (two ornamental foliage and two flowering), Mr. H. Cole secured the first, one of the plants being a good specimen of Lantana. In the class for three foliage plants, Mr. Mark Webster, the society's energetic librarian, showed some excellent specimens. The prize for the best specimen plant in flower was secured by Mr. W. G. Conn with a fine *Eucharis amazonica*. The fruit was not so plentiful as in former years, but the quality was of a high standard. There was a slight falling off in the Fuchsias, while the Sweet Peas were hardly as good as last year.

There was a record show of table decorations, one large marquee being utilised for this section. Miss Edith Heginbotham, Vernon House, Albemarle Road, followed up her successes of previous years by securing the first prize, and also a silver-gilt medal, with an artistic arrangement of pink Sweet Peas and Carnations, with a mirror for a centrepiece. The whole of the exhibits in this section were of a meritorious character. The buttonholes, the hand bouquets, and vases of flower classes did not fill so well as might have been expected.

One can hardly speak too highly of the exhibits of trade and professional growers. Messrs. J. Laing & Sons, of Forest Hill, were to the fore with their superb collection of Roses, including the famous Mrs. John Laing, besides some splendid Begonias and herbaceous plants. Mr. T. Horsman, of the Station Conservatory, showed some excellent wreaths, baskets of flowers, bouquets, &c. Mr. J. Surman, of the Victoria Nursery, Beckenham, made a specialty of Petunias. The other exhibitors included Messrs. Peed, Roupell Park Nursery; Mr. J. R. Box, West Wickham; Messrs. D. Prior & Son, Colchester; Messrs. G. & W. H. Burch, Peterboro'; Messrs. Carter, High Holborn; Mr. John Russell, Richmond; Messrs. Cannell & Sons, Swanley; Mr. John Charlton, Tunbridge Wells; Mr. Thos. S. Ware, Feltham, &c. Mr. Geo. Day, gardener to H. F. Simonds, Esq., Southend Road, showed some rare and pleasing Orchids from the well-known Woodthorpe collection.

As already announced, Mr. Redden was the winner of the R.H.S. silver medal, whilst Mr. W. Biswell secured the bronze medal offered in the amateur section, his exhibits being a Fuchsia and a white single Begonia. The medals of the Beckenham Society were awarded to the following:—Mr. Geo. Day for the group of Orchids; and to Messrs. Laing, Cannell, Peed, Ware, Carter, Surman, T. Horsman,

Charlton, Russell, F. Cogger (gardener to W. Potter, Esq.), and Knight (Bickley).

The judges were as follows:—Messrs. H. Cannell, J. Laing, W. Whalley, W. J. Simpson, W. Wright, and G. Bard. Mr. H. Mileham and Mrs. Lnscombe Pare adjudicated in the ladies' section.

Formby, July 10th.

Very few villages have given greater evidence of horticultural improvement than Formby, partly owing to the number of gentlemen who are keen enthusiasts and have been able to make barren sand into fruitful fields and gardens, so that now Roses and almost all kinds of vegetables and flowers luxuriate as in no other part of the Liverpool district.

In glancing over the schedule no fewer than ten silver cups were this year offered for Roses alone, surely a record for a village show, and a healthy sign of the earnestness of the committee. The first prize in the class for twenty-four Roses was taken by Miss M. A. Rimmer of Formby, who staged *La France*, Mrs. R. G. Sharman Crawford, *Horace Vernet*, and *Charles Lefebvre* as the best. Mr. Aindon, gardener to F. A. Rockliff, Esq., *Briars Hay*, Formby, was second. For twelve Roses, distinct, and the same number of Teas and Noisettes, Bernard Kennedy, Esq., Formby, took both classes; Caroline Testout, Bessie Brown, Mrs. W. J. Grant, and a splendid bloom of *Madame Cusin*, which gained the prize (the N.R.S. silver medal) for the best bloom in the show, were all of excellent build. The same gentleman took a smaller class, thus winning three silver cups. The same distinction fell to C. Hacking, Esq., Formby, the remaining cups falling to Miss Rimmer and Messrs. Rockliff and Carlyle. For growers of less than 200 plants Messrs. Sergenson, Pugh, and Passmore proved the winners, Mr. Pugh winning the N.R.S. bronze medal for the best bloom.

For twelve bunches of Sweet Peas a silver cup, valued at five guineas, presented by Mr. Henry Middlehurst, drew forth the splendid entry of thirty, the visitors being worked up to a pitch of delight at the gorgeous sight. Mr. W. Dodd proved the winner with a bright, clean lot; Mr. Geo. Lunt, who staged more naturally, second; and Mrs. Watts third. There were some very good Zonal Pelargoniums staged by Luthen Watts, Esq., and a more finely flowered lot of Fancy Pelargoniums than those staged by E. Thirkell, Esq., would be difficult to find, as were the latter's single Begonias.

Mr. Watts scored well with double Begonias, and he, with Mr. Rockliff, very evenly distributed the plant classes throughout. A very pleasing arrangement of pink and mauve Sweet Peas was the first prize table decoration from Miss M. A. Rimmer, who also had a boldly planned Rose basket. Amateurs entered in all their classes, Messrs. Ardran, Moskyn, Passmore, and Sergenson proving the best. The small fruits and vegetables, such as Carrots, Peas, and Potatoes, were splendid, as were the miscellaneous cut flowers. James Bruce, Esq., and Bernard Kennedy, Esq., presided over the luncheon, and spoke of the enormous strides the society is making. Messrs. Pugh and Bushell, in command, did good service; the exhibits being arranged by Mr. Waterman.

Stambridge Rose and Horticultural, July 10th.

The supporters of this society were fortunate in having one of the finest days of the past beautiful week for the holding of their annual show. Stambridge lies only a few miles from Southend-on-Sea, in the midst of a lovely district in eastern Essex. The thundering guns from Shoeburyness shake the rectory grounds of Stambridge, wherein the show was held. Rev. Mr. Burnside is a prime instigator of this event, and succeeded in combining an exhibition of Roses and a bazaar with the ordinary attractions of this year's flower show. The band of the Shoeburyness Artillery was in attendance, while recreation was obtained by those who cared to patronise the cocoa-nut shies and shooting galleries, and in the evening there were illuminations. Every provision had been made to guide visitors from the neighbouring centres, placards being set up in prominent positions.

Roses.—Nurserymen.—Division 1.—The premier award for thirty-six distinct varieties was won by Messrs. B. R. Cant & Sons, Colchester, who staged a very even set. Victor Hugo was, perhaps, as finely shown as it has been this year. His varieties are all worth naming, and here they are:—Back row: Her Majesty, Madame Victor Verrier, Helen Keller, Horace Vernet, Madame Eugène Verrier, E. Y. Teas, Ulster, A. K. Williams, Bessie Brown, fair; John Stuart Mill, Mrs. John Laing, and Alf. Colomb. Second row: Auguste Rigotard, Comtesse de Nadaillac, Le Havre, Duchesse de Morny, Victor Hugo, splendid; The Bride, very fine; the new seedling Ben Cant, Suzanne Marie Rodocanachi, Xavier Olibo, remarkably handsome; Mrs. E. Mawley, Chas. Lefebvre, and Marchioness of Londonderry. Front row: Ulrich Brunnner, Reynolds Hole, Maman Cochet, Duke of Connaught, Madame Cadeau Ramey, Duke of Teck, Bridesmaid, Fisher Holmes, Madame Crapelet, Earl of Dufferin, Mrs. Cocker, and Louis Van Hontte. The blooms were clean and splendidly staged. Messrs. F. Cant & Co., Braiswick Nursery, Colchester, showed good blooms, but



LILIUM JAPONICUM VAR. ALEXANDRÆ.

(See Note on page 52.)

lacking in finish; the dryness, no doubt, accounted very largely for this. They staged a very handsome Bessie Brown and a magnificent A. K. Williams; Countess of Rosebery was also good, and Victor Hugo was of fine form and colour, though somewhat ragged.

Teas and Noisettes.—Messrs. B. R. Cant & Sons, Colchester, beat Messrs. F. Cant & Co. for eighteen Teas. The blooms were clean, but considerably undersized. Medea was sweet and beautiful, Madame Cusin grandly coloured, Maman Cochet and its white sport both very fair, and other strong blooms were Muriel Grahame, Ethel Brownlow, Mrs. E. Mawley, and The Bride. The rest in the stand were Catherine Mermet, Marie Van Houtte, Comtesse de Nadaillac, Hon. E. Gifford, Bridesmaid, Golden Gate, Jean Ducher, Madame Bravy, Madame de Watteville, and Souvenir de S. A. Prince. Messrs. F. Cant had a good Golden Gate and Muriel Grahame.

For twelve treble Teas Messrs. F. Cant & Co. were first with a fair set, the best being Madame Cusin, Sylph, and Madame Hoste. The Messrs. B. R. Cant received first award in class 4 for twelve of any H.P. Rose, most magnificent samples of A. K. Williams, grand in colour, strong, and of fine form, being carefully staged. Messrs. F. Cant & Co. were second with Charles Lefebvre. The latter had the only exhibit of a dozen blooms of one variety of Hybrid Teas, staging, however, lovely representative blooms of Bessie Brown. For a dozen samples of any Tea or Noisette the premier award was accorded to Rev. F. R. Burnside, Great Stambidge Rectory, with clean and beautiful, though rather loosely built blooms of White Maman Cochet. Messrs. F. Cant & Co. second with Mrs. Ed. Mawley, very fine indeed, and exceedingly close upon the first prize lot. Mr. G. H. Baxter, Hutton Park, Brentwood, formed a respectable third with Maman Cochet.

Amateurs and Gardeners.—In division 2, for twenty-four blooms, distinct, Mr. G. H. Hutton beat Mr. R. W. Bowyer, Hertford Heath, Hertford; both staged very fair samples. In the premier class here was the N.R.S. silver medal bloom as the best H.P. in the show, this being a fair sample of variety A. K. Williams. In the same exhibit we found the best Tea Rose, a handsome flower of Maman Cochet. Mr. Bowyer had five blooms of Mrs. W. J. Grant, Ulrich Brunner, and Mrs. J. Laing. The third prize fell to Mr. J. Burles, gardener to J. Tabor, Esq., The Lawn, Rochford. For six varieties, in class 10, Mr. H. E. Molyneux, Balham, was the only exhibitor. Mr. A. Epps, gardener to Mrs. Millar, Leigh House, won for four varieties.

For twelve Teas Mr. G. H. Baxter led again, having respectable blooms, including Ernest Metz, Golden Gate, Bridesmaid, Muriel Grahame, Princess of Wales, Comtesse de Nadaillac, Maman Cochet, Medea, Sylph, White Maman Cochet, Innocente Pirola, and Catherine Mermet. In class 15 the second prize alone was awarded, this falling to Mr. R. W. Bowyer. His stand of six Teas included a splendid bloom of Maman Cochet, which obtained the N.R.S. silver medal awarded in divisions 4 and 6.

Decorative Roses, open classes.—Here Messrs. F. Cant & Co. were easily first with massive bunches of Crimson Rambler, Madame C. Guinoisseau, The Garland, Bardon Job, Himalayica, Marquis of Salisbury, Souvenir de C. Guillot, Moschata alba, Hélène, Madame Faloot, Lucida plena, and Gruss an Teplitz. Messrs. B. R. Cant & Sons second, having the very lovely Rosette de la Legion d'Honneur, with a white beam in the centre of each crimson petal. Rev. J. H. Pemberton, Havering-atte-Bower, Romford, formed an exceedingly close third.

Vegetables.—*Amateurs and Gardeners.*—This did not form a very expansive feature of the show, but at the same time some interesting exhibits were placed upon the stages. We always make a point of suggesting good and encouraging prizes for edible produce, and trust that fruit and vegetable sections may be more and more strengthened. Mr. J. Burles led for a dish of six kidney Potatoes, and for a similar entry of round varieties; Mr. J. Carter came second. For six autumn-sown Onions, Mr. Geo. Mathams beat Mr. J. Burles. Mr. G. Overall had the best six Carrots, and Mr. J. Carter first for six Shorthorn ditto. For six Parsnips, Mr. J. Carter showed a poor dish, but received the prize. After much deliberation Mr. J. Burles was accorded premier place for twelve pods of Peas in class 9; and Mr. J. Carter first for Longpod Beans. Mr. A. Epps had the best twelve Dwarf Beans, and Mr. G. Overall the leading award for the same amount of Scarlet Runner Beans. Mr. Geo. Mathams followed Mr. J. Burles for an exhibit of three heads of Celery. Good Cabbages and Lettuces were on view, the chief exhibitors being Mr. A. Epps, Mr. E. Hatton, and Mr. G. Overall. Mr. A. Epps won for a brace of Cucumbers, and Mr. E. Hatton for Rhubarb. Mr. W. Bloomfield had a very nice couple of Vegetable Marrows, beating Mr. J. Burles, who, however, led for a dish of Tomatoes, and Mr. G. Overall second. In class 21, Mr. J. Carter was the only exhibitor of a basket of garden produce (vegetables), which was not anything to boast of.

Fruit.—Only a few dishes of Currants, Strawberries, Raspberries, Cherries, and Apples, with two bunches of black Grapes, were included. The winners were—Gooseberries, Mr. A. Epps; Red Currants, Mr. J. Burles; White, Mr. J. Carter; Black, Mr. J. Carter; Raspberries, Mr. W. Bloomfield; Apples, Mr. G. Overall; Strawberries, Mr. J. Burles; basket of eight kinds of fruit, Mr. A. Epps; Grapes, Mr. J. Overall.

Plants were good, though only a few were staged.

Cottagers' produce seemed to us almost as creditable as in the foregoing gardeners' section. Mr. James Starnard won for a collection of vegetables, and Mr. W. Stone for a collection of seven kinds of fruit. The rectory garden and grounds were very smart and enjoyable.

Thornton Heath Horticultural, July 10th.

The first annual summer show of the Thornton Heath and District Horticultural Society was held in the grounds adjoining Thornton House, London Road (kindly lent by E. G. Bates, Esq., Oak Lodge, Thornton Heath), in splendid weather. This is a young but enterprising society, and for a first attempt made an attractive show. Some good Roses were shown, and the classes for cut blooms, hardy fruit, and vegetables were very well filled. Groups of plants for competition were absent except in a single instance, and were exhibited not for competition by nurserymen and others. The secretary is Mr. J. P. H. Bewsher, Leighton House, Parnmore Road, Thornton Heath, and this gentleman worked hard, also his assistants, for the success of the exhibition. The show was visited by a large number of people in the afternoon and evening.

In the nurserymen's classes for forty-eight Roses, distinct, Messrs. B. R. Cant & Sons, Colchester, took first prize with an excellent group, including A. K. Williams, Bessie Brown, Gustave Piganeau, Ulster, Madame Victor Verdier, White Lady, Duchesse de Morny, Madame Eugène Verdier, Etienne Levett, Marchioness of Londonderry, Horace Vernet, Mrs. J. Laing, C. Lefebvre, Comtesse Nadaillac, Ulrich Brunner, Her Majesty, Marchioness of Downshire, J. Stuart Mill, Golden Gate, Dupuy Jamain, Countess of Rosebery, Madame Crapelet, Innocente Pirola, Maurice Bernardin, Marie Baumann, Prince Arthur, Mrs. Cocker, Le Havre, Suzanne Marie Rodocanachi, Auguste Rigotard, The Bride, new seedling H.P. Ben Cant, Comtesse de Ludre, Madame Delville, Edouard Andre, Muriel Grahame, Dr. Andry, Duke of Connaught, Helen Keller, Comte de Raimbaud, Fisher Holmes, Mrs. Sharman Crawford, E. Y. Teas, Kaiserin Augusta Victoria, Xavier Olibo, Madame Cusin, Reynolds Hole, and Jeannie Dickson; second, Mr. G. W. Burch, Rose grower, Peterboro'. For twenty-four Roses, three trusses each, distinct, Messrs. B. R. Cant & Sons were again first with splendid blooms; Mr. G. W. Burch, Peterboro', second. For twelve Roses, one variety, Mr. G. W. Burch, Peterboro', was first with good fresh examples of Fisher Holmes. For eighteen Teas or Noisettes, Mr. G. W. Burch took third prize with good samples, the best varieties Ernest Metz, Maréchal Niel, media rubens, and Madame Lambard.

In class 8, open only to growers of more than 500 Roses, Mr. G. V. A. Schofield, Sutton, was first with six H.P. and H.T. Roses, thus:—Mrs. John Laing, Duke of Wellington, Marie Finger, Comte de Raimbaud, Caroline Testout, Prince Arthur. Mr. G. Prebble, gardener to Miss Thrale, Shirley, was second, and Mr. Keppell H. Gifford, Sutton, third. For six Tea Roses Mr. G. Prebble took third prize. For six Roses, one variety, Mr. Keppell of Sutton was first with Mrs. John Laing, having clean, bright, and fresh samples. Mr. G. Prebble was second with La France, and Mr. A. Morrison third with La France.

In the local Rose classes for twelve Roses, distinct, Mrs. W. S. Lascelles, Croydon, was first, the varieties being Salamander, Her Majesty, Ulrich Brunner, Caroline Testout, Kaiserin Augusta Victoria, Comtesse de Ludre, Mrs. John Laing, Maréchal Niel, Prince Arthur, Mr. F. Cant, Duc de Montpensier, Mrs. R. G. Sharman Crawford. Mrs. A. C. Gifford, South Norwood, was an excellent second. For six Roses, distinct, Mrs. Lascelles, Croydon, was first with Ulrich Brunner, Caroline Testout, Mrs. J. Laing, Madame Victor Verdier, Baroness Rothschild, and Mrs. F. Cant; no second; third, Mr. W. Holme-Daviss. For six Tea Roses only a second prize was awarded, this to Mrs. Lascelles, Croydon. For six Roses, one variety, Mrs. Lascelles was barely first with Her Majesty; Mr. Holme-Daviss second with Maman Cochet; and Mr. G. H. Bokler, Heathville, Thornton Heath, third with Captain Christy.

Table Decorations.—These were a good feature. The first prize was awarded to an excellent light and graceful arrangement of Grasses, Iceland Poppies, Sweet Peas, Gypsophila, Cornflowers, Ivy-leaved Pelargoniums, set off with sprays of Maidenhair. The second, which was also a pretty arrangement, chiefly of Sweet Peas and Grasses, with heavy sprays of ornamental Asparagus, went to Miss Blanche Buckland, 8, Benlah Road; third to Miss Agnes Butfield, 118, Brigstock Road.

In plant and cut blooms some good exhibits were displayed. Mr. Prebble had some well grown bushy plants of Coleus, taking first prize; Mr. R. Gladwell, gardener to Miss Mortimer, second. Mr. Gladwell was first for Ferns, a good assortment of Adiantums and Pterises; Mr. Prebble second. The latter exhibitor was first with six Zonals, double and single varieties. Flower stands, bouquets, baskets of flowers, buttonholes, and sprays were pretty and effective, ladies taking first and second prizes in all the arrangements. For a flower garden design Mr. C. Brooke, 144, Canterbury Road, was commended, and awarded extra prize, small geometrical beds being filled with flowers edged with sprays of Box. A patriotic device, consisting of the letters E.R. set on a shield-shaped design of red, white, and blue flowers, surrounded with wreath of Oak leaves, with a bunch of Roses, Shamrock, and Thistle at the base, bunched with patriotic ribbon, took the first prize, which was awarded to Mrs. Hill, South Norwood; Mr. Leon Dart was second with an arrangement in a box. Mr. W. E. Carr, Croydon, took first for twelve bunches of hardy cut flowers, including Delphiniums, Lysimachia, Iceland Poppy, Veronica spicata, Gaillardia grandiflora, Erigeron glabellus, Achillea multifolium, Centranthus roseus, Telekia speciosa, and Agrostemma coronaria. Mr. E. A. Perry second. Bunches of Sweet Peas were excellently shown, most of the best varieties being represented.

Collection of vegetables set up by Mr. D. McArthur comprised some good Peas, Lettuce, and Potatoes; Mr. W. H. Lakeman showed a 25 lb. tray of Lister's Prolific Tomato, also a dish of Peas and two heads of giant Rhubarb; the above all highly commended.

Division 3, allotted to cottagers only residing within the district, brought out the chief exhibits in vegetables and hardy fruits. First-class Peas, Broad Beans, Carrots, Potatoes, Onions, Marrows, and Lettuce were exhibited. Red and Black Currants, Gooseberries, Strawberries, and Raspberries were excellent.

Miscellaneous Exhibits.—Trade exhibitors put up some attractive displays. Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood, London, had a fine circular arrangement of Palms, Dracænas, Carnations, Cannas, Crotons, and other foliage and flowering plants. Mrs. E. S. Towell, Hampton Hill, Middlesex, exhibited specimens of Cactus-flowered Zonal Pelargonium Fire Dragon. Mr. Thos. Butcher, nurseryman, George Street, Croydon, had displayed a superb table comprising large Palms, bright Crotons, excellently flowered Gloxinias, vases of Sweet Peas, and formal floral arrangements, which the judges highly commended. A group of plants not for competition was set up by Mr. W. H. Lakeman. It comprised Ferns, Lilliums, Cannas, ornamental Asparagus, Coleus, intermixed with Geraniums and Fuchsias.

Messrs. Hammond & Hussley, ironmongers, Croydon, exhibited in the grounds a splendid assortment of garden chairs, seats, wirework, hammocks, Japanese sunshades, lawn mowers, tents, croquet and tennis games, and other appliances.

Woodbridge, July 10th.

The fiftieth show of this excellent society was held in the usual place, and was favoured as hitherto with brilliant weather. Great efforts had been made by Mr. John Andrews, the indefatigable hon. secretary, to make the jubilee show worthy of the occasion, and I think they were thoroughly successful. The number of classes on the schedule were 190, which attracted nearly 1500 entries. The large cruciform tent used at Ipswich, which covers 1000 square yards, had to be supplemented by four or five other marquees, and they seemed to be all well filled. Quite an array of leading judges for all departments came from every part of the country. I much regret that I am unable to report even the Roses fully; after four hours in that hot tent I could not stand it any longer, and left at the end of the judging. H.P.'s were still weak, and the grand flowers of past years were not to be seen. B. R. Cant & Sons were first for the cup, thirty-six Roses; D. Prior and Sons second, and Messrs. Harkness third, but the local paper reports that the Yorkshire Roses stood the heat best late in the afternoon. For twenty-four and twelve Teas Frank Cant & Co. led, and also gained first prize for new and "miscellaneous" Roses.

In the amateur classes Mr. Orpen was first for twenty-four with a good stand with a splendid Her Majesty and a good specimen of Waltham Standard; Mr. Foster-Melliar second, showing a good Bessie Brown, and Mr. H. Berners third. For twelve Teas Mr. Orpen was first with a nice stand, Mr. Foster-Melliar second with rather a poor one, and Mr. Berners third. In twelve Roses, Mr. Orpen first and Mr. Berners second. In six similar H.P. or H.T. there was a close contest, Mr. Foster-Melliar being placed first and Mr. Orpen second, each having Bessie Brown in good form. One of the blooms in the first prize stand gained the medal for the best H.P. or H.T., to which I had no objection, but personally I should have given it to Mr. Orpen's Her Majesty; Mr. Berners third. In six similar Teas Mr. Orpen was first with Maman Cochet, Mr. Berners second, and Mr. Foster-Melliar third with Maréchal Niel, which soon gets flabby in great heat. The medal Tea was, I believe, a Maman Cochet of Mr. Orpen's.

A handsome gift was presented to Mr. Andrews, about £50 having been collected by 2s. 6d. subscriptions, and the wonderful jubilee show of this little town seems to have been a great success.—W. R. RAILLEM.

Bath Floral Fête, July 11th.

This popular West of England show was held as usual in the beautiful Sydney Gardens on the above date, and in weather that can only be described as tropical, the temperature recorded by the shade thermometer rising to 90° in the afternoon. The shade afforded by the wealth of tree growth in these gardens must have been a source of pleasure to the visitors, who patronise well the efforts of the society's practical officials and genial secretaries, Messrs. Pierson and Jeffery. Roses were represented in beautiful form, goodly quantity, and first-rate quality, and together with other and miscellaneous floral aspects, must have been a rare feast for patronal resident and visitor alike. Messrs. Alex. Dickson & Sons, Newtownards, claimed, as usual, the lion's share of success, winning with seventy-two single trusses, thirty-six triplets, eighteen Teas or Noisettes, twelve single trusses of any single Rose, and six trusses of any new variety. Needless to say their blooms were of their usual high-class stamp, and the class for seventy-two varieties, for which a silver cup, or £8, was offered as a first prize, included Duke of Edinburgh, Bessie Brown, Capt. Christy, Venns, La France, Charles Darwin, Lady M. Beauclerc, Duchess of Bedford, The Bride, Gustave Piganeau, Lady Londonderry, Madame Eugène Verdier, White Lady, Marquise Litta, Dr. Campbell Hall, Tom Wood, Alice Grahame, new;

Lady Ashtown, Kaiserin Victoria, Chas. Lefebvre, Lawrence Allen, Mons. Paul Neron, Edith D'Ombraïn, new; Ulrich Brunner, Killarney, G. H. Mackereth, Marquise de Castellane, François Courtenr, Madame Cusin, Comte Raimband, Comtesse de Turenne, Ernest Metz, Duc de Rohan, Souvenir de S. A. Prince, Duke of Teck, Mildred Grant, Reynolds Hole, Duchess of Portland, Earl of Duff-rin, Niphetos, Madame Haussman, Danmark, Viscountess Folkestone, A. K. Williams, Caroline Kuster, Lady Arthur Hill, Her Majesty, Marie Baumann, Heinrich Schultheis, Helen Keller, Souvenir d'un Ami, Dr. Andry, Horace Vernet, Madame Gabriel Luizet, Comtesse d'Oxford, Madame Wagram, Triomphe de Caen, Caroline Testout, Etienne Levat, Souvenir de President Carnot, Suzanne M. Rodocanachi, White Maman Cochet, Mrs. W. J. Grant, Margaret Dickson, Star of Waltham, Innocente Pirola, Duchesse de Morny, and Marchioness of Downshire. Messrs. Cooling & Sons, Bath, took second prize with a nice stand of smaller flowers.

The class for thirty-six triplets found the contestants in exactly the same position as in the previous entry, Messrs. Dickson and Cooling being the only exhibitors. Jeannie Dickson, Mrs. Edward Mawley, Alice Lindsell, Robert Scott, White Maman Cochet, Comtesse de Pannisse, Lady Mary Fitzwilliam, Muriel Grahame, Ulster, Edith D'Ombraïn, Mildred Grant, new; A. K. Williams, and Mrs. Sharman. Crawford were some of the noteworthy names and blooms. The Oxford growers, Messrs. Geo. Prince and J. Mattock, secured the awards in the class for eighteen distinct varieties, three trusses of each, in their well-known form, the last named championing the cause in the next class, that for thirty-six distinct singles, Messrs. G. Prince and S. Treseder, Cardiff, following. Messrs. Dickson's stand of eighteen distinct Teas comprised excellent blooms of Muriel Grahame, Madame Cusin, Golden Gate, Mrs. Ed. Mawley, Souvenir de S. A. Prince, Comtesse de Nadaillac, The Bride, Niphetos, Maman Cochet, Medea, Souvenir d'un Ami, White Maman Cochet, Caroline Kuster, Bridesmaid, Princess of Wales, Comtesse de Pannisse, and Souvenir d'Elise Vardon.

In the amateurs' division the Rev. J. H. Pemberton carried off the first prize both for twenty-four distinct singles and twelve triplets, distinct; Mr. Conway Jones, Gloucester, and Mr. Alex. Hill Gray, Bath, being second in each instance. Messrs. W. M. Lovett, J. Hinton, W. A. Hick, H. G. Francis, and Mrs. Rush were the successful exhibitors in a sub-division of the amateurs' section with good blooms. In the class for eighteen distinct varieties of Teas, Mr. Alex. Hill Gray was the only competitor. For twelve varieties and six triplets there was much more competition, Mr. Conway Jones and Mr. A. H. Gray taking firsts, and Messrs. R. Foley Hobbs, H. G. Francis, and Conway Jones sharing the remainder.

Roses shown in vases, though represented only by two exhibitors, Messrs. Prince and Mattock, made a very effective exhibition, and such classes help to relieve the formality of the display made in boxes. With White Maman Cochet Messrs. A. Dickson & Sons won for twelve blooms of one colour, Messrs. Cooling second. Twelve single trusses of a yellow Rose, Messrs. Treseder and J. Mattock won with twelve La France; Mr. Hill Gray defeated the Messrs. Dickson, and for six trusses of any new Rose Messrs. Dickson staged Bessie Brown, a Rose of great merit and distinction. Messrs. Veitch & Sons, Chelsea, showed the new Rambler Queen Alexandra, and gained a most favourable impression from many of the Rose loving public present. Messrs. Cooling proved invincible in both classes for garden Roses, twenty-four and twelve distinct bunches, and they tied with Mr. A. A. Walters in a class for a table of Roses 10 feet by 4 feet arranged for effect. Silver medals of the National Rose Society were given to H.P. Bessie Brown, staged by Mr. Conway Jones, and to Souvenir d'Elise Vardon, shown by the same exhibitor, as the best Tea, both these being for amateurs. Mr. John Mattock won the H.P. medal in the nurserymen's division with Horace Vernet; Messrs. Dickson the best Tea or Noisette with Muriel Grahame.

Besides the Roses there is a great wealth of variety at the Bath show, furnished in groups, open and amateur, bouquets, and baskets of flowers, table decorations—always a feature here—Sweet Peas, herbaceous flowers, Carnations, wild flowers, &c. Single and double Begonias are largely staged, both as plants and cut flowers. Strawberries, too, are a feature, and on this occasion, despite the drought, were numerous and fine.

Certificates of merit were given for non-competitive exhibits to Messrs. I. House & Son, Westbury, for Delphiniums and Asters; Mr. J. Elsom, Bath, floral designs in cut blooms; Mr. A. Edwards, Arnold, Notts, Ferns and cut flowers; and Messrs. J. Veitch & Sons, Chelsea, for their new Rambler Rose Queen Alexandra.—W. S.

The Scottish Horticultural.

A small summer exhibition, promoted by the Scottish Horticultural Society, of flowers and fruit was opened on Friday, the 12th inst., in the hall of the Edinburgh Café. Under the care of the new secretary, Mr. Peter Loney, the show was a great success. A prominent feature of the exhibits was the very fine display of Sweet Peas, and among those who showed this now favourite flower, none were more to the front than Mr. Alexander, gardener to Mrs. Wauchope of Niddrie. His collection included all the newer varieties, and the colours were particularly rich and brilliant. There was a nice stand by Mr. D. Rhind, gardener to the Marquis of Lothian, Monteviot, of Roses and herbaceous

flowers. Among the latter was a new white Delphinium and some good Scabious. Messrs. Cocker & Sons, Aberdeen, had a beautiful table of herbaceous cut flowers. These included several new and pretty varieties of Pæonies, a white Princess Wilhelmina, and a rose pink Duchess of Sutherland and some choice Roses. Messrs. Cunningham, Fraser & Co. helped the show greatly by a fine display of herbaceous cut flowers and alpine plants. There were 103 varieties of the former staged, and they had also on exhibition an attractive display of the newer Sweet Peas. Mr. Hugh Dickson, Belfast, had a lovely show of Irish Roses. Among the newer blooms were Mavourneen, a pink bluish, notable for the long thin character of the bud, and Bessie Brown, a pinkish cream, one of the crack Roses of this season, and there were fine specimens of such favourites as Horace Vernet, Captain Hayward, and White Lady. Messrs. Laing & Mather, Kelso, had a fine show of Malmaison Carnations, and a splendid vase of pink Malmaisons were staged by Mr. D. Kidd, Carberry Tower, Musselburgh. Messrs. James Dickson & Sons, Hanover Street, had a table of herbaceous flowers; Messrs. Methven & Sons a decorative arrangement of stove and greenhouse plants, which included some fine Hydrangeas and Lilliums; Mr. A. M'Millan, gardener to Mrs. Currie, Trinity Cottage, showed excellent Campanulas and Tea and Hybrid Roses; Messrs. Storrie and Storrie, Dundee, were strong on Sweet Peas; the president of the society, Mr. Comfort, Broomfield, had a nice display of Sweet Williams; Provost Mackie (gardener, Mr. A. McKenzie), Leith, was an exhibitor both of flowers and Strawberries; and Mr. Brotherston of Tynninghame showed two of the rarities in the exhibition—Calla Elliottiana and a cross between that and the white variety; Messrs. Todd & Co., Shandwick Place, had a beautiful display of Roses and other flowers, the showy pink Caroline Testout being in evidence; Messrs. Laird and Sons showed Palms and other ornamental plants; and Mr. G. Wood, Oswald Road, had a lovely bouquet of Orchids. Among the exhibitors of Strawberries were Mr. Harper, Tulliebelton, Perth; Mr. David May, Abbotsford Gardens, Galashiels; Mr. James Fordyce, Bonally Tower, and others. The fruit was shown in superb condition, the varieties mostly on exhibition being Scarlet Queen, Royal Sovereign, James Veitch, Joseph Paxton, Duke of Edinburgh, and Dr. Hogg. Mr. M'Hattie and Mr. J. Whytock, Dalkeith Gardens, judged for certificates, and made a good many awards. In the course of the afternoon there was a fair attendance of visitors at the show.

Manchester, July 13th.

A brilliant day, though rather too hot for Roses, with wealth, beauty and fashion, the best of military bands, a place second to none in which to hold an exhibition, having beautiful promenades, well-kept gardens, and last, but not least, the enormous attendance; such were the conditions that must have made Mr. Weathers, the popular curator; his able assistant, Mr. Paul; and that energetic rosarian Mr. James Brown, feel that their work in arranging the above show had not gone unrewarded. Affiliated as the society now is with the National Rose Society, there seems to be every prospect of Manchester becoming one of the great centres of England. Roses, on the whole, were not so good, excepting, of course, the superbly built blooms staged by Messrs. Alexander Dickson & Sons, Newtownards, co. Down, and Ledbury, which simply kept crowds lingering the whole day long. The competitors, too, were numerous; but this noted Irish firm had the huge distinction of taking six of the leading prizes out of seven, scoring second in the seventh, and being awarded the silver medal for the best H.P. in the show with a lovely Horace Vernet. It was a marvellous display throughout, and few would grudge them their splendid success. The other silver medal was awarded to Mr. George Prince, Longworth, for a charming Maman Cochet. The sun told heavily on the Rose baskets.

For sixty, distinct, Messrs. Alex. Dickson & Sons, Newtownards, had a splendid stand, leaving no cause for complaint, so superior were they. Marchioness of Londonderry, Duke of Fife, Robert Scott, Duke of Edinburgh, Marie Verdier, Duc de Rohan, Madame Eugène Verdier, Sir Robert Stont, Caroline Testout, Gustave Piganeau, Duchess of Vallambrosa, Star of Waltham, Lady Clanmorris, Earl of Dufferin, Marchioness of Dufferin, E.Y. Teas, Her Majesty, Horace Vernet, Bessie Brown, A. Colomb, Helen Keller, Killarney, Xavier Olibo, Florence Pemberton, Reynolds Hole, Ulster, Camille Bernardin, Alice Lindsell, Comte de Raimbaud, Lady Moyra Beauclerc, A. K. Williams, Mildred Grant, Fisher Holmes, Maman Cochet, Sultan of Zanzibar, K. A. Victoria, Mamie, Ernest Metz, Prince Arthur, Mrs. W. J. Grant, Sonvenir de President Carnot, Charles Darwin, Lady Mary Fitzwilliam, Duchesse de Morny, Madame Cadeau Ramey, S. M. Rodocanachi, Duchess of Portland, Heinrich Schultheis, Pride of Waltham, Dupuy Jamain, Mrs. E. Mawley, Charles Gater, Victor Hugo, Sonvenir d'Elise, Mile Cross, Edith D'Ombraim, White Maman Cochet, Louis Van Houtte, Emilie Gonin, and La Rosière were the varieties. The Kings Acre Nurseries, Ltd., Hereford, came a very fair second, but lacking the size and contour of the former. Horace Vernet, Madame A. Jacquier, Maréchal Niel, Marchioness of Londonderry, Reynolds Hole, Bessie Brown, Mrs. W. J. Grant, Sultan of Zanzibar, Niphetos, and Medea were all very fine in colour. The third prize lot went to Messrs. Paul and Son, The Old Nurseries, Cheshunt, again with smaller flowers. Seven competed in this class.

For thirty-six, distinct, Messrs. Dickson & Sons' were again

magnificent, every bloom being thorough in character. Ulster, Mildred Grant, Muriel Grahame, Helen Keller, Dr. Andry, Marchioness of Dufferin, and Mrs. Mawley were quite the best. Messrs. D. & W. Croll, Dundee, were a moderate second, and Messrs. Paul & Son third. Four lots were staged. For twenty-four Teas or Noisettes, distinct, the Irish firm were well to the fore, Niphetos, Marcellin Rhoda, Ernest Metz, White Maman Cochet, Golden Gate, and Medea were all lovely. Messrs. D. Prior & Son, Colchester gained second position, some fine blooms being noted; Mr. John Mattock, Oxford, was placed third. Five boxes were staged.

For twelve Teas or Noisettes Mr. George Prince, Longworth, Berks, put up the most perfect of stands, La Boule d'Or, Maman Cochet, Ernest Metz, White Maman Cochet, and Mrs. E. Mawley being extra fine; Messrs. Alex. Dickson & Sons followed most closely, with Mr. Jno. Mattock third. Six boxes were arranged. For the best twelve light Roses, one variety, and the same number of dark, Messrs. Dicksons again proved quite unbeatable, staging in extra fine form Bessie Brown and Horace Vernet.

The amateur classes were well filled, and very great interest centred around them owing to the closeness of the collections. The Rev. J. H. Pemberton and Messrs. Tattersall, Lindsell, Boyes, and Machin all staged in no mean manner. The premier honours for twenty-four, distinct, fell to Mr. J. K. Grant, gardener to F. W. Tattersall, Esq., Crookleigh, Morecambe, with rather small but well formed blooms, the best of which were Bessie Brown, Helen Keller, Oliver Delhomme, Mrs. J. Laing, and White Maman Cochet. Equal seconds were awarded to the Rev. J. H. Pemberton and E. B. Lindsell, Esq., Hitchin, with capital boxes, Mr. Boyes, Derby, being a close third. Four stands were staged.

For twelve, distinct, H. V. Machin, Esq., Worksop, was a long way ahead; Mrs. J. Laing; Bessie Brown, and Marchioness of Londonderry were quite superb. The Rev. J. H. Pemberton and F. W. Tattersall, Esq., followed. H. V. Machin, Esq., had small but typical flowers in class for eighteen Teas or Noisettes, and the Rev. J. H. Pemberton for twelve Teas or Noisettes, also for one colour with Ernest Metz in fine form. Twelve grand blooms of Her Majesty secured the light Rose class for H. V. Machin, Esq., and Horace Vernet was the selected variety amongst dark ones. The local classes, too, added a certain amount of interest to the show, and notwithstanding the difficulty the "Mancunians" experience in the growth of the Rose, one is glad to notice that new exhibitors appear on the scene as evidence of the good work the Society is doing.

The exhibits of garden Roses were not so strong as in former years, but Mr. Geo. Prince made up a display that gave the utmost satisfaction, Mr. Machin being second.

Sweet Peas were there in such numbers as to fill quite a small show, a marvellous display from Mr. Hinton of Warwick embracing every shade. Mr. Eckford kept up his great reputation, and Mr. Derbyshire of Irlam had specially good flowers. For the prizes, too, the competition was extra good and quality superb. Two other trade exhibits were greatly admired—viz., Mr. J. H. White of Worcester, with six dozen large vases of herbaceous and bulbous plants, beautifully arranged and of extra quality. Two first-class certificates were awarded for Iris King Edward VII., with large deep purple flowers and rich yellow blotches. Queen Alexandra was an exact counterpart as regards size, but of a pure white colour. The hybrid Nymphæas from Mr. Amos Perry, Winchmore Hill, consisted of twenty-eight varieties, arranged in shallow tins. They were much admired, and first-class certificates awarded to Carolina nivea, a pure white pointed petalled variety; Leydeckeri fulgens, an intense blackish crimson; and lucida, a very large deep rose. The Misses Hopkins, Knutsford, and Mr. Pattinson with Violas, helped the show materially by the tasteful exhibits.

Before closing it would be out of place not to mention a wonderful Liliun auratum carrying five massive spikes of flower, each about 7 feet high, and exhibited by Mr. G. Sharpe, gardener to J. E. Williamson, Esq., The Grange, Stretford. Some fine Strawberries were staged.—R. P. R.

Bradford Horticultural.

A floral smoking concert was held on July 9th at the Peel Park Hotel, Bradford, by the members of the Bradford Horticultural Society. This is the first year of the society's existence under the above title. The movement had its origin some eight years ago in the Peel Park Flower Show, when a few working men, anxious to promote public interest in the cultivation of flowers and vegetables, formed themselves into a society, and held a show annually for three years, themselves sustaining the expenses. Since then the show has gradually increased in size and importance, and now does no small credit to its originators. This year it was decided to put the society on a proper basis, and with this object the public were invited to nominate a number of gentlemen to sit on a committee with the founders of the society, which is affiliated with the Royal Horticultural Society. The next show is to take place on Friday and Saturday, the 30th and 31st of August, and there is already a good list of prizes, including one from the Mayor (Mr. W. C. Lupton). In the absence through indisposition of the president, Mr. G. A. Booth, the chair was occupied at last night's gathering by Mr. T. Crossland.

Birmingham Amateur Gardeners.

A paper was given at the June meeting of the Birmingham and District Amateur Gardeners' Association by Mr. H. T. Martin of Stoneleigh Abbey Gardens, before a splendid attendance of members and friends. Mr. Martin chose for his subject "Hardy and Greenhouse Climbing Plants," and the information he gave about the habits and peculiarities of each variety was most interesting, and could not help but be of incalculable benefit to those amateurs who are endeavouring to grow some of these truly beautiful plants, many of them under rather adverse circumstances it is feared. The lecturer gave a list of those plants in both sections most likely to thrive in or on the outskirts of a large town, and strongly recommended everyone, before planting, to properly prepare the border or bed. Want of attention to this point was the cause of many failures. At the conclusion of the paper a hearty vote of thanks was rendered to Mr. Martin for his very able paper.

National Amateur Gardeners' (Liverpool Branch).

Fifty-five entries must have come as a surprise to most of the members present at the monthly meeting held in the Common Hall on Thursday, July 4th, the quality and number of exhibits being quite in advance of anything hitherto seen, and augurs well for the future. It was also noticed that new members exhibited with much success. Mr. Tinsley had a lovely half-dozen Roses, Mr. Hitchmough being second. A charming spray of W. A. Richardson Roses came from Miss Hunter, Mrs. Harris and Mrs. Stevenson dividing the second and third prizes. For three Roses and four bunches of flowers Mrs. Morris was well ahead with capital examples. The bunches of Sweet Peas from Mr. Cangle were superb. Mrs. McGregor had the best Hydrangea, besides showing well in several classes. The baskets arranged for effect numbered seven, but there was room for improvement in several of them. First honours were equally divided between Mrs. Stevenson and Miss Davies, the former lady winning with *Fancy Pelargoniums* and handsome *Fuchsias*. Grand *Petunias* and a rich coloured *Gloxinia* secured two firsts for Mr. Hoskyn. The *Gloxinias* from Mr. A. Dodd were of such a special character as to secure him the first prize and certificate. He also won with a tuberous *Begonia*. In the lecture hall Mr. Muir presided over a good audience, who followed with great interest the excellent paper on "The Japanese *Chrysanthemum*" by Mr. J. Heaton, gardener to R. P. Honston, Esq., M.P., The Lawn, Aigburth. The usual votes terminated this excellent meeting.—R. P. R.

Leeds Paxton, July 10th.

This year the members of the above had their annual excursion conjointly with the Horsforth Gardeners' Society on the 10th inst., the nurseries of Messrs. Clibrans being selected for the purpose of the visit. The party, numbering about 100, left Leeds in specially reserved carriages attached to the 8 A.M. for Manchester, which was reached at 9.30; here they were met by representatives of Messrs. Clibrans, who had provided conveyances, in which the party were driven to the nurseries at Altrincham, a distance of about eight miles. The day was very warm, and the drive was much enjoyed. The branch nurseries at Hale were first visited, where the large and varied stocks of fruit and forest trees, hedge and covert plants, Conifers, shrubs, &c., were much admired, special comment being made upon the remarkably healthy appearance presented by everything, and the cleanliness observable in all parts of the grounds. From Hale the party were driven *via* the Cemetery Nurseries, where additional stocks of Conifers in the finest possible condition were noticed, to the Stamford Nurseries at Bowdon. Here were seen houses filled with huge stocks of Ferns, Ficus, *Aspidistras*, some fine *Lapagerias*, and some grand plants of that rarely seen but lovely plant, *Luculia gratissima*. Outside were noted some rare and beautiful shrubs, Conifers, and other choice subjects, all in the best of health. Luncheon was provided at the Unicorn Hotel, Altrincham, and after the exertions of the morning was much appreciated. The chair was taken by one of the representatives of Messrs. Clibrans, who occupied it in the unavoidable absence of Mr. Clibran. The toast list included "The King, Queen, and Royal Family;" "Success to the Leeds Paxton and Horsforth Gardeners' Associations;" and "Prosperity to Messrs. Clibrans," who were acting as hosts to the two societies for the day. Luncheon over, the Oldfield Nurseries were next visited, where, amongst other things, some fine stocks of specimen Hollies were noted. Despite the intensely hot day, the contents of the numerous glass houses came in for a full share of inspection, special admiration being expressed at the fine stocks of Crotons, Roses, Carnations, Vines and Figs, all of which are specialised at Oldfield, the collections of stove, greenhouse, and indoor plants generally being freely commented upon for their great extent, and the skill displayed in their cultivation. Out of doors were noticed the collections of alpine and herbaceous plants, the latter being in full beauty. By this time the afternoon was far spent, and the visitors regretted that time would not permit of their visiting the grounds at the Carrington branch, where such subjects as *Rhododendrons*, *Privet*, and *Poplars* are grown by the million. Tea was provided at the Unicorn Hotel at five o'clock, after which the party were photographed. Shortly after six o'clock the party rejoined the conveyances, and with ringing cheers for Messrs. Clibrans started on the return journey to Manchester, leaving there by the 8.27 P.M. for Leeds, after a most profitable and enjoyable day's outing.

Southampton Horticultural Society.

By the kind permission of Sir Samnel and Lady Montagu, a garden-party and fête took place in the beautiful grounds of South Stoneham House on Wednesday afternoon and evening, under the auspices of the Southampton Horticultural Society. The picturesque grounds, with its shady trees, rustic walks, and beautiful lakes, formed an ideal place for such a gathering. A very large number of ladies and gentlemen availed themselves of the treat. The band of the Borough Police played some capital selections, which were greatly enjoyed. A special item of interest took place in the afternoon—namely, the dragging of the noted salmon pool. The fishers were very successful, catching some very large salmon and salmon trout, which were put up for auction and sold. Mr. J. Key Allen, F.R.H.S., chairman of the Council, proposed a vote of thanks to Sir Samnel and Lady Montagu for the use of the delightful grounds. He then presented Sir Samnel's head gardener, Mr. Thos. Hall, to whom the success was largely due, for the excellent manner in which he had made the necessary arrangements, with a silver medal in honour of his having been the largest prizewinner of the society's show held on the pier the week before. In the evening the grounds were illuminated with many coloured fires. The society benefits by the party to something like £50. The secretary and council have every reason to congratulate themselves upon the result of their labours.—J. M.

East Anglian Horticultural Club.

The monthly meeting of this club was held on Wednesday, the 10th, at the Shirehall Hotel, Mr. J. Powley, F.R.H.S., in the chair, supported by Mr. Robert Holmes, F.R.H.S. The debate for the evening was opened by Mr. G. James (gardener to Mr. E. T. Boardman) upon "Hardy Florists' Flowers." In his paper Mr. James gave some interesting illustrations of the interest the preceding generation of horticulturists took in such flowers as the Pansy, Tulip, Hollyhocks, and Auricula. Norwich was particularly noted for the interest its worsted weavers took in their Tulip shows. Laced Pinks, Carnations, and Picotees, too, were thought much of, and greater pains than now bestowed upon their culture. The discussion brought out many anecdotes, the old time florists present entering into it earnestly. The second series of exhibitions for the challenge cup (vegetables) brought out three splendid collections, Mr. G. James and Mr. C. Hines coming out a "dead heat." Mr. G. James was first for Roses with fine blooms of the Tea-scented varieties. Mr. C. Matthews also staged some very fine varieties of the H.P. section. As a vegetable grower Mr. C. Hines again showed his superiority, his Peas and Cauliflowers being exceptionally good. Mr. D. Howlett had the best of the pot plants, and some good Carnations and cut Zonal Pelargoniums. There were also staged a dozen varieties of Malmaison Carnations grown at Tranby Croft, Hull, by Mr. G. Leadbetter. Much having been heard of Tranby Croft lately as a Carnation growing centre, much interest was evoked in the grand blooms sent. Mr. Church of Braconash also exhibited three blooms of a new seedling border Carnation, a lovely rose colour, and deliciously scented, raised by him. Mr. Joyce, Eaton Park, showed bunches of fruit as taken from the plant of Holmes' Supreme Tomato to demonstrate its superiority as a market variety. A splendid volume of the "English Flower Garden" was presented to the club by Mr. Roll. The duties of judging were admirably carried out by Messrs. W. Rush, J. Fitch, and E. Tice.

Royal Horticultural Society of Ireland.

The usual monthly meeting of the council was held at the offices, 5, Molesworth Street, on Thursday last, at which were present Major Cusack, J.P., vice-chairman, presiding. Also present: H. Drummond, J.P.; E. D'Olier, F. W. Moore, M.R.I.A.; Geo. M. Ross, M.A.; H. P. Goodbody, and H. Smallman.

The secretary submitted a report of the result of the last show, which was considered most satisfactory, representing a large financial increase on previous years, and from a horticultural aspect eclipsed all previous Rose shows. On the recommendation of the judges the council were pleased to award Messrs. Richard Hartland & Sons, The Lough Nurseries, Cork, a gold medal, the highest award within their gift, for a meritorious and unique exhibit of double and single *Begonias*, double and single Zonal Pelargoniums, show and regal Pelargoniums.

The following were duly elected members of the society:—A. Pim, Esq., Bellevue, Blackrock; George Kernan, Esq., Hamilton, Ailesbury Road; Mrs. Hone, St. Doulough's Park, St. Donlough's, Mrs. W. W. Goodbody, Clonfadda, Blackrock; Mr. Bogie, The Gardens, Castlemartin.

Preliminary arrangements were made for holding the great autumn show in Merrion Square, on Tuesday, August 27th (first day of horse show), at which the Blue Hungarian Band has been engaged to play.

A discussion arose on the practice of some exhibitors staging their boxes higher than the stipulated height laid down by the rules of the society, and by their so doing seriously taking away from the symmetrical appearance of the exhibits, and the council decided on rigidly enforcing for the future the rule that all boxes shall be of the uniform height of 4 inches in front and 7 inches at back, and that any infringement of this rule will subject the exhibitor liable to disqualification.

A letter was read from his Majesty's Keeper of the Privy Purse intimating his Majesty's pleasure in acceding to the request of the council to become patron of the society in succession to her late Majesty Queen Victoria.



Fruit Forcing.

Vines.—*In Pots for Early Forcing.*—The canes for starting the first week in November, to ripen the fruit in March or early in April, should by this time have completed their growth, and must not have any more water than will prevent the foliage from becoming limp. Expose fully to light and air, so as to thoroughly ripen the wood and the buds. If the laterals have been allowed to extend with a view to thickening the cane, they must be brought back gradually by cutting away part at a time, reducing each by degrees to one leaf. The Vines should be kept free from insects, syringing occasionally if red spider appear, for it is important that the leaves perform their functions. When the wood becomes brown and hard place the Vines on a board or slates in front of a south wall, securing the canes to its surface to prevent the foliage being damaged by wind. Afford water only to prevent the leaves flagging, cut away the laterals close to the cane, and in a few days shorten the cane to the length required. The principal leaves must not be injured, but left to die off naturally. The best varieties for early forcing are White Frontignan, Foster's Seedling, Black Hamburg, and Madresfield Court. Later Vines should be encouraged to make a good growth and perfect it, keeping them clean, also exposed to all the light and air possible. They must not be over-watered, nor neglected for due supplies of water or liquid manure. Cut-back Vines are much the best for early forcing, as the canes make an earlier and sturdier growth, and perfect it sooner than others. This is important, for the Vines have more rest and start with greater regularity.

Early Forced Planted-out Vines.—It is not advisable to force Vines year after year to ripen their crops before May or June, and houses which are started in December or at the new year, to afford ripe fruit at the times mentioned respectively, are best planted with varieties that ripen together, the structures being only of sufficient size to admit of a supply of Grapes for a period of not more than six to eight weeks. This is as long as black Grapes will hang under a May, June, and July sun without turning red, or white Grapes from becoming brown on the exposed side of the bunches, even when a slight shade is afforded from sun. Such arrangement admits of the foliage being cleansed with water from a syringe or engine; but when there are late as well as early varieties in the house, the dry atmosphere that must be maintained on their account when the Grapes are ripening causes red spider to increase on the foliage, and this is very disastrous to present and future crops of Grapes. Early Vines that ripened their crops in May or early June will soon be cleared of Grapes. They should be thoroughly cleansed, employing an insecticide if necessary, and the foliage be preserved in health as long as possible by occasional syringing, full ventilation constantly, and due supplies of water or liquid manure at the roots.

Muscats Ripening.—Unless the season is exceptionally fine, and the Vines started early, Muscats require fire heat to insure their perfect maturation, even when ripening at the hottest part of the year. The time taken by Muscat of Alexandria and Canon Hall to ripen is not less than six to eight weeks from commencing to colour, and if the Grapes are extra fine, and the Vines in vigorous health, perfect finish is not had for some time longer. They require time, with assistance from fire heat, so as to secure a night temperature of 65° to 70°, 75° to 85° by day, up to 90° or more, with abundance of air. A rather dry atmosphere is essential to the attaining of that golden hue characteristic of rich and full Muscat flavour. This is secured by free ventilation, a little constantly, but the atmosphere must not become arid, damping down occasionally. In large houses the moisture arising from the borders is enough, except in hot weather, then the paths and borders should be damped daily. Too much moisture is fatal to Muscats when ripening, causing them to "spot," therefore it is necessary to have a gentle warmth in the hot-water pipes, and a little air constantly to prevent the deposition of moisture on the berries. Abundant supplies of water must be given to the roots, for when there is a deficiency of moisture the Grapes shrivel. With the borders properly constructed, and the drainage thorough, too much water can hardly be given at the roots, after the leaves are full sized, until the Grapes are well advanced in ripening. Needless waterings, however, are baneful, causing shanking; and dribbles, mere damping of the surface, very ineffective, doing quite as much harm as good, besides being deceptive of the right indication of the soil beneath as regards moisture.

Young Vines.—Canes planted this season should, provided they are to be cut down to the bottom of the trellis, leaving three buds there for furnishing a continuation of the rod, and two side shoots for bearing next year, be allowed to grow unchecked, so as to secure a good root formation and sturdy stems. Any Vines intended for producing full crops next season, on the extent considered sufficiently stout in rod,

should have the laterals issuing from the side of the buds to which they are to be shortened stopped to one leaf, and the principal leaves kept free of growths. If permanent Vines, the cane need not be shortened till it has grown to the top of the house, cutting back at the winter pruning to three good buds from the bottom of the rafter or trellis, and only allowing the side growths to bear each a bunch of Grapes in the second year to prove the variety, taking the leading growths forward without cropping. Supernumeraries intended for next year's bearing, and then to be removed, should be stopped at a length of 7 to 9 feet, pinching the laterals to one leaf, and sub-laterals in like manner. These ought to be shortened in September, and by degrees cut away close to the cane, and in a fortnight afterwards the Vines should be pruned to the first plump bud below the first stopping, leaving the old leaves to die off naturally. Thorough ripening of the wood is important, a free circulation of air being necessary, with fire heat if the weather be cold and wet.—ST. ALBANS.

The Kitchen Garden.

Cucumbers.—If kept in a free growing and active condition at the roots, Cucumbers, both in houses and frames, will continue in a free bearing state. The requirements consist in pruning out exhausted growths entirely, removing useless and yellow leaves, and disposing new growths over the space available, stopping these from one to two joints beyond the fruits. The roots must be occasionally stimulated by weak applications of liquid manure, and encouraged to increase and multiply fresh and active fibres by top-dressings of rich soil mixed with a little artificial manure. A moist atmosphere must prevail in order to prevent attacks of red spider, and also for the welfare of the plants.

Vegetable Marrows.—These are now in a very active condition of growth, and are likely to continue so if the roots remain moist. Maintaining a moist root run for them, and a little regulation of the growths to prevent crowding, is really all that is necessary to enable them to continue productive, with the exception of cutting the fruits as soon as large enough for use. If the latter remain to grow large they take considerable support from others which are ready to follow. Young fruits, with soft skins and tissue, are much better for use than large, old, and hard fruits. Give water copiously as required; in dry, poor soil, and during a dry period, it may be every day, though in many cases a good soaking twice weekly will meet all requirements.

Carrots.—The main crop of Carrots should be kept free from weeds, and crowded plants removed. A mulching of short lawn grass proves valuable in retaining moisture. This is a good season to sow a crop of Early Horn for late autumn and winter use. Ground recently cleared of some early crop, such as Potatoes, where the soil was deeply cultivated, will be the best. See that it is perfectly free from rubbish and strong-rooting weeds, and rake off rough stones, making the whole level. Draw the drills a foot apart, and, if the weather be dry, rather deeper than for spring sowing. The object of this is that the drills may be soaked with water previous to sowing the seed. Scatter the latter thinly, and cover with dry, fine soil.

Turnips.—A few rows of White Dutch Turnips should be sown. Select ground where the soil is rich, make it fine on the surface, draw drills, and moisten with water, afterwards dusting slightly with superphosphate, and sow the seed. Germination soon ensues. Thin as soon as possible, continuing gradually, and promote growth by light Dutch hoeings.

Leeks.—If the full crop of Leeks has not been planted more plants must be placed out. It is not absolutely necessary to plant in trenches, though this method insures plenty of food and moisture, resulting in the production of fine stems, which may be blanched higher than those planted on the surface. Give water and liquid manure to well established plants.

Celery.—The earliest rows may be well soaked with water and liquid manure. After this chop down soil and place it round the stems, first tying them together with strips of raffia grass, which, however, must not be drawn tightly, but so that the centres have room to extend, and the stems meeting closely prevent soil reaching the hearts. To have early blanched roots it is important to continue the earthing from time to time, but soil should never be placed higher than the hearts. Trim off suckers and the lower leaves from any rows advanced enough to need attention, and wherever dryness of the soil is apparent water copiously. Plant out the latest Celery at once.

Potatoes.—Where the tops of early Potatoes have died completely down lift the tubers; keep those for use cool and away from light. Seed tubers may be fully exposed to air and light, whereby the skin will become green, hard, and well ripened. Clear away the old and dead haulm, leaving the ground as clean as possible after the crop has been cleared.

General Work.—Late Peas and Beans should have the sticks placed to them for supporting the growths. Water as necessary, and a mulching to retain the moisture. Fill vacancies with autumn Broccoli, Savoys, Curled Greens. Sow Lettuce and Endive, Parsley, Spinach, and a pinch of early Cabbage in the south, while a good bed should be sown in the north. The outdoor crop of Tomatoes should be kept well moistened at the roots, affording also liquid manure to heavily cropped plants.—LYMINGTON, HANTS.

TO CORRESPONDENTS

- All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Names of Plants (Fairlawn).—1, *Hedera Helix* var. *Emerald Green*; 2, *Cratægus Douglasi*; 3, *Mimulus glutinosus*; 4, *Calamintha grandiflora*. (A. T.).—*Sonchus arvensis*. (A. L. G.).—1, *Chicorium Intybus*; 2, *Lysimachia punctatum*; 3, *Polygonum Baldschuanicum*. (L. R.).—*Spartium junceum*. (J. A.).—1, *Roses* should be sent to some large grower, we do not undertake to name them; 2, *Asplenium Trichomanes* var.; 3, probably *Hemerocallis Middendorffiana*; 4, *Hemerocallis flava*. (A. Baker).—Probably *Dracunculus canariensis*. (R. S.).—1, *Nepeta suaveolens*; 2, *Stachys Betonica*; 3, *Morina longifolia*; 4, *Scabiosa canticasica*; 5, *Scabiosa sylvatica*. (H. S.).—1, *Cephalaria alpina*; 2, *Coronilla varia*; 3, *Lathyrus latifolius*; 4, *Lythrum Salicaria*; 5, *L. S. rosea*. (St. Andrews).—1, *Oenothera speciosa*; 2, *Spiræa digitata*; 3, *Poterium officinale*. (R. Jackson).—1, *Helenium autumnale pumilum*; 2, *Isatis glauca*, the Woad.

Nectarines Shrivelled (J. A.).—The cause is usually lack of nutrition of a consolidating nature in the growing stages, combined with a deficiency of light for its elaboration, consequently at the ripening stage too much moisture is evaporated, and the fruit shrivel in consequence. But the shrivelling is characteristic of some varieties, Lord Napier being very prone to shrivel at the apex when ripening, while such varieties as *Elruge* seldom do so under identical circumstances. The shrivelling in the present case is due to the recent hot droughty weather; a moist condition of the atmosphere and shade from the direct rays of the sun would have secured more even ripening, and that without interfering with the quality of the fruit. It would be well another year to give the trees a top-dressing of the following mixture when they start into growth:—Dissolved bones, dry and crumbling, three parts; nitrate of potash, finely powdered, two parts; ground gypsum, one part, mixed, applying 4 ozs. of the mixture per square yard, and pointing or scratching in very lightly, repeating when the stoning is completed. The house should be well ventilated in the early stages of the fruit swelling, so as to secure a sturdy, thoroughly solidified growth in the fruit, shading from powerful sun during the ripening of the fruit.

Apple Leaves Blistered (R. C.).—The leaves are very seriously blistered by the caterpillars of the Pear-tree blister moth, *Tinea Clerckella*, a minute moth which appears in May or June and deposits eggs upon the foliage of Apple, Cherry, and Pear trees, most commonly the latter. The larvæ or caterpillars, hatching from the eggs in the course of a few days, penetrate beneath the cuticle, and by feeding upon the parenchyma or internal substance of the leaf cause numerous brown blisters, greatly disfiguring the leaves and interfering with their functions. When full grown, which is the case with the caterpillars in the present instance, the caterpillars spin cocoons, one each for itself, on a leaf in crevices of the bark, and in cracks of walls, &c., and change into a chrysalis or pupa, and remain as such until the following season, though in some cases there are probably two broods in a season, the latest being full grown in September, when the maggot or caterpillar spins itself a cocoon on a leaf or other suitable position before alluded to, sometimes letting itself down to the ground by a thread, and forming the cocoon on fallen leaves, remaining in the pupa state until the following spring. All dead leaves, therefore, should be removed in autumn, and burned or otherwise disposed of, so that the chrysalis may be destroyed. It is also advisable to spray the trees and walls, if the trees are against such, with a solution of caustic soda (97 per cent. purity) and commercial potash or pearlash, $\frac{1}{2}$ lb. of each to 8 gallons of water, on a dry day when the trees are quite dormant, the solution being applied at a temperature of about 140°. This is best done shortly after the leaves are all down, mild weather being chosen for the operation. In the early summer the trees may be sprayed with tar water, $\frac{1}{2}$ lb. of gas tar being boiled in 2 gallons of water for half an hour or until it will readily mix with water, then diluting to 50 gallons, and applying by means of a spraying apparatus; suffice that the foliage be coated with the finest possible film of the tar water. The smell of tar is hateful to the moths, and they seldom deposit eggs on the foliage so coated. Syringing with paraffin emulsion or petroleum softsoap, 2 ozs. to a gallon of water, is also useful against the pests, and where spraying with Paris green is practised for caterpillars the tiny creatures in eating through the cuticle take their last meal.

Meadow Broomspear (M. M. R.).—In the absence of a description, or a specimen leaf or flower, we cannot tell you what plant bears this local name. None of the authorities we have consulted mention the name. It is probably a native *Iris*, *Gladiolus*, or typhaceous plant. Does it grow in moist places?

Barren Strawberries (J. B.).—It is difficult to say whether it would be best to root them out or leave them one year more. If you have good runners from fruitful plants (or can get same) by all means renew your bed. It is generally accepted that runners from barren Strawberries form unfruitful plants.

The Mullein Moth (Ento.).—The specimen you have sent is the Mullein moth. During this month, but at various times between the end of May and August, a greenish white or slaty-coloured caterpillar, more than 2 inches long when full grown, may be found feeding on the various species of Mullein (*Verbascum*) and Figwort (*Scrophularia*). On each segment of this caterpillar are four large black dots, sometimes separate, sometimes running together; there are smaller black dots along the sides, and a double row of yellow spots on the back, with others on the sides. The head is yellow, spotted with black. This is the larva of the Mullein moth (*Cucullia verbasci* and *Noctua verbasci* of some). This moth appears commonly in May. It is about 2 inches across the expanded fore-wings, which are of a dark reddish-brown colour, clouded and lined with black, and with a large white spot on each, resembling the figure 3, as shown in the accompanying drawing. The hind-wings are also reddish-brown, but paler, and



MULLEIN MOTH.

sometimes almost white. The female lays her eggs on the Mulleins and their relative species of plants, which eggs are hatched in a few days if the weather is warm. The caterpillars when of full growth we have already described, and they then descend into the roots of the plants where they have been feeding, forming cocoons of half-rotted leaves and earth, so

firmly bound together as to resemble small hard clods. They remain in the pupa state till the following May, or even for two years. It is curious that the caterpillar of this moth, although its food is usually vegetable, eats with much apparent satisfaction the skins which from time to time it casts during growth. This strange repast seems even a stimulating dainty, speedily restoring the caterpillar to vigour after the painful moulting by which it has been supplied with it.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Next Week's Events.

- Friday, July 19th.—National Carnation and Picotee Society (Southern Section) Show at Crystal Palace.
 Saturday, July 20th.—Newton Mearns Rose Society's Show.
 Tuesday, July 23rd.—Durham, Northumberland, and Newcastle Botanical and Horticultural Society Exhibition at Newcastle (two days); Tibshelf Rose Exhibition.
 Wednesday, July 24th.—Nottinghamshire Horticultural and Botanical Show (two days); Strabane Horticultural Exhibition (two days); Boston (Lincs.) Exhibition (two days); Southern Counties Carnation Show at Southampton.
 Thursday, July 25th.—Selby Exhibition; National Sweet Pea Society (two days); Bedale Rose Show; Belfast Rose.

Phenological Observations.

JULY 19TH TO 25TH.

PLANTS DEDICATED TO EACH DAY.

19 Fri.	Humming bird hawk moth seen.	Golden Hawkweed.
20 Sat.	Goat moth seen.	Virginia Dragon head.
21 Sun.	Musk beetle seen.	Philadelphia "Lily."
22 Mon.	Bee Orchis flowering.	African "Lily."
23 Tu.	Turtle-dove last heard.	Dark purple Scabious.
24 Wed.	Swallow-tail moth seen.	Tree Lupine.
25 Thr.	Gooseberries and Cherries at their height.	Banberry.



A Pleasant Drive.

WHEN, during the hottest of the dog days, a friend and neighbour makes the offer of a drive round his outlying farm, and at the same time a glance at the methods of others on the way thither and back again, we are naturally not loth to accept, knowing that everything we shall see will be worth a visit, as our friend does nothing badly or by halves. Probably more can be learnt as to crop prospects from a casual visit to land with which we are familiar, than from a more extended tour into strange surroundings. The crops close around us, and which we see every day, are apt to fix in our minds a false standard; and comparison with others which we have not previously seen, but which are growing on land which we know the exact value of, may often give us cause for self-conceit, but more often, and much more likely, knock the self-conceit out of us. So it was in this case. Setting off directly after breakfast, we had not proceeded more than two miles before we came across a piece of Barley (Wrench's Prolific), which quite put in the shade the field in front of our own windows, and which we had thought invincible. The very next field to Wrench's was also very good, but though its name was "Invincible" (Garton's), it was clearly beaten by the other. Other fields of our friend's which we looked at later were almost, if not quite, as good, the varieties being Garton's Invincible and Carter's Prize Prolific, the latter a very heavy crop of straw, but not so well headed, and showing signs of weakness in the straw little calculated to withstand a heavy rainfall. Barleys on the whole, even on sandy soil, we found to exceed our expectations, and we should not estimate the yield at less than 5 qrs. per acre. Last year these farms did not produce more than $3\frac{1}{2}$, which was probably the worst crop they had grown for many years. Passing by some small fields of Wheat and Potatoes, we were much struck by the very promising appearance of the crops, a promise not usually associated with small holdings, at any rate in this neighbourhood. Our friend, who is retail agent for a large manure firm, let us into a secret, and explained this by declaring that these small farmers were amongst his best customers, using artificials in far greater proportion than the larger farmers. The latter manure their land by grazing sheep; but though, as a rule, they grow heavier crops of Barley, their Wheat is not so level and good as that on the small holdings.

Anon we come to our friend's fields, and first inspect one of Wheat, which, though growing on dry limestone, would be difficult to beat on typical Wheat soil. Although it had not long been out of flower the sparrows are already hard at work. Squarehead's Master is the kind of Wheat, and a masterpiece it is, 5 feet high and level as a table; there should be far more than 5 quarters. Another field of the same Wheat, and equally good, was visited later, the two plots being divided by a field of roots, firstly Carter's Windsor Mangold just covering in the rows and showing every promise, as it should, having received a good dressing of short muck, 7 cwt. of Potato manure (5 per cent. ammonia, 20 per cent. phosphate, 4 per cent. potash), followed by 1 cwt. nitrate of soda after singling. Next a large piece of Elephant Swede, a full plant and very healthy, but patchy in appearance through irregular germination, this latter being caused by drought. A good breadth of white Turnips just up and looking beautiful completed what we doubt not will be very shortly a most promising field of roots.

Passing through a gate we come to three fields of hill-side grass, which the occupier describes as the blot on the farm. Two of the fields, 50 acres altogether, are certainly very poor in appearance, and certainly worth no more than the 10s. per acre which he values them at; but we fancy that this will not always remain their value, for the next field, one of 28 acres, presents a very different appearance, and has carried three horses, nineteen beasts, and 100 sheep, doing them well, whereas the 50 acres has carried but thirty-three beasts, three horses, and thirty sheep. To what is the difference owing? Half a ton of basic slag per acre applied years ago is the sole cause. One field is a mat of Clover, the others are barely covered with coarse grass. The slag has been rather slow in its effects, but it has been conclusive. Our friend being a man of great energy, and not partial to slow methods, proposes to try superphosphate on the other fields, but a mixture of the two manures would rather commend itself to us. The cattle in the two pastures, all of shorthorn type, looked very well, and some of them were ready for draughting into the feeding pasture, which lay over the hill on the eastern slope. A shire mare and foal, the latter a first champion prizewinner, though but seven weeks old,

and a Hackney mare (by Danegelt) and foal, also a prizewinner grazing and looking well on the bare hill side, testify to the high character of the farm stock. The feeding pasture next visited contains some excellent bullocks fit for the butcher, and others which will take little stall feeding if they do not go off from grass.

Yet further we come to a capital crop of Clover being carried home straight from the windrow without cocking. The master is at first inclined to challenge his foreman's wisdom in so hurrying matters, but the man firmly holds that the hay is dry enough, and we agree with him. Not exactly a bumper crop, but good for the season. But what is this field of lilac, just like one huge penny postage stamp? A 20-acre field of Potatoes in full bloom, a perfect flower garden; the seed made in Germany, and the name "Professor Maerker." Practice is worth more than profession, but the promise is immense. The haulm is so strongly erect and woody that it gives every assurance that the Potato is what it professes to be—a huge cropper and absolute disease resister. The next field is planted with Up-to-Date, and we should have thought it perfect had we not already made acquaintance with the Professor. A corner of British Lion looks equally well. If this kind acts up to its reputation of being 4 tons better than Up-to-Date, the Professor Maerker will have its work set to come out at the top.

A visit to the yards reveals a number of young calves being reared with the bucket, and another lot weaned and now living on cut hay and straw, with a little green food and cake. They will not be turned out to grass until next spring. A young pedigree bull looks viciously at us from a small yard, and in a shed is a fine older one, which will ere long find its way to the butcher. A fine flock of ewes are suckling their lambs on two capital pieces of young seeds (first year), and both dams and young looking so well it is no surprise to hear that prizes at the local show were recently won by them. We have not space to say much of our return home by another route, but we pass through some excellent land and well farmed, none of it, however, looking better and little as well as that of our energetic friend, who is a splendid type of what a tenant farmer should be, and is rightly held in the highest estimation by one of the best of landlords.

Work on the Home Farm.

A very hot week and a drying wind has dried the land surface very rapidly. Land in poor condition is already showing signs of weakness in the appearance of brown and yellow patches in crops which should not be ready for the reaper yet awhile.

Hay making and Turnip hoeing find plenty of occupation for all hands, and the horses to spare from the hay leading are all wanted to keep the horse hoes moving between the Turnip rows. Weeds are easily killed now, and a constantly stirred surface allows little moisture to escape. We have had two or three heavy dews which have helped to refresh the growing crops, but there is every appearance of further heat. Hopes of a shower are, however, raised by the oldest inhabitant, who has seen a Noah's Ark in the sky, and speaks mysteriously of sundry pains in his joints. Another nice rain would do good, but if we are to have it, may it come soon, and not when harvest is just ready, as it did last year.

Swedes and Turnips have come up rather irregularly, and some of the former were some time in the ground waiting for sufficient moisture. The rains supplied it, and the seed is all up. There is little or no fly, and this hot weather, with or without rain, will bring trouble in the shape of too many roots to hoe at once. Extra men are quite unobtainable, so the regular staff must be tempted by piece work at a good price to make long days, and so get the crops run over. As regards common Turnips, which want hoeing badly, a rough thinning may be quickly done by running a set of light harrows across the rows. If the harrows remove too many plants the removal of a few teeth will make all right. A horse hoe, such as is used for Corn crops, will also make useful work if carefully used. Such a cross-thinning not only will give much-needed relief to the overgrown plants, but materially lessen the work of hand-hoeing.

Fat stock markets are very much crowded both with cattle and sheep, and graziers are complaining bitterly of the lack of profit. The fact grows plainer every day that the rearer of stock gets the lion's share of the plunder, and occupiers of grass farms must pay more attention to that branch of farming if they are to make a living profit.

Cutting up Cabbage for Poultry.—When one has plenty of Cabbage on hand it does not pay to cut or chop them. Given to them whole, care only being taken to strip off decayed portion if any, and to peel off any dry, tough, outside layers of leaves that are oftentimes found on heads that have been kept in a dry cellar, the fowls will eagerly help themselves. If, however, the supply is limited, and it is an object to make the most of what I have at hand, I practise chopping the Cabbage fine in a meat chopper. For this purpose (and one should include also Beets and meat), one of those where a double set of cog wheels gives a very rapid chopping movement to a knife that works perpendicularly may be used. By using the little machine (the knife in mine is about 10 inches long) one is able to utilise the stump, as well as the heads, which are too hard for the fowls to reduce by their bills.

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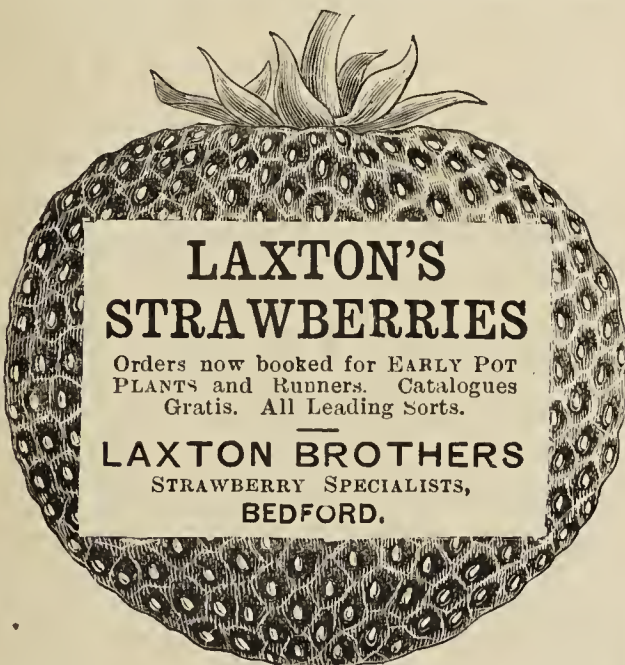
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From ALBERT MITCHELL, Esq., Linden House,
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I have much pleasure in sending you photographs of Webbs' Emperor Cabbage and also of a variety which I was recommended to test alongside it. The variety in question was represented as a "Wonderful" Cabbage, and I was charged a much higher price than yours for the seed. I thought I had something to beat your Emperor, as I always want to get the best stocks to supply my contracts. I treated both alike and planted them out at the same time, planting 6 ranks of 550 plants of the "Wonderful" new variety beside the ranks of Emperor; this I repeated four times across the field of 10 acres, thus each had an equal chance. You can see the result by the photographs and also from the following: Result of WEBBS' EMPEROR: Scarcely a plant bolted. Began to cut March 11th, 6000; March 13th, 2400; April 16th, sold 40,000, buyer to cut as required and I am now selling daily. Result of the "WONDERFUL" new variety. Quite 51% bolted—see photograph; of the remainder there is no sign of any fit for cutting, in fact my foreman wants me to run the plough through the 24 ranks as they make the field look so bad. No more of the "Wonderful" new variety for me; I would not have it as a gift.

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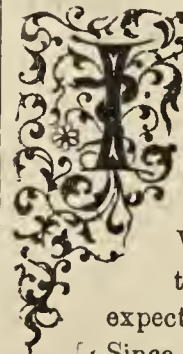
DICKSONS SEED GROWERS CHESTER



Journal of Horticulture.

THURSDAY, JULY 25, 1901.

Tropic Fruits.



REMEMBER years ago an old traveller giving it as his experience and opinion that the ripe (fresh) Date was the finest and most delicious to the taste, of all fruits.

Whether devotees of the Mango, the Mangosteen, or the Durien can be expected to agree with this, I cannot say.

Since that opinion was broached I have personally had an opportunity of becoming acquainted with most tropic and other fruits obtainable in their season in diverse parts of the world. The Mango I have always thought a rather overrated fruit, though when eaten at exactly the right time is certainly of considerable excellence; while, on the other hand, the Mangosteen as a delicacy can hardly be spoken too highly of. The little white divisions into which it parts, like the Orange, are like soft but substantial flakes of cream, flavoured with a combination of exquisite essences, to which no one name can readily be given. Unfortunately, being produced in so few parts—Penang and the Straits Settlement being its indigenous home—it cannot fall to the lot of many to enjoy this epicure's luxury. The Durien inhabits the same kind of steaming tropical climate, and has to be consumed soon after it is gathered. Its unbearable smell, resembling to a great extent rotten eggs, renders it prohibitive under most circumstances; and when travellers bring some of it on board ship, it is invariably hung up at the mast head, and only brought down to be eaten and done away with. If you can make up your mind to put up with this noxious essence that the outer part emits, the inside is really a very great delicacy. Hitherto, importers have failed to ship the forenamed fruits, but recently an attempt has been made, under the improved methods of conveying such perishable products, to market them safely at Covent Garden, where they fetch very high prices, and on several occasions her late Majesty Queen Victoria has had consignments of Mangosteens, attended, I believe, with a considerable amount of success.

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

All over India, and countries of a similar climate, the Banana or Plantain is extremely plentiful. It has an accommodating growth, and seems to be more or less in season all the year round. It varies immensely in excellence, some being not worth touching, and others of superb flavour. In colour, too, they are widely different. I have met with them a bright red, almost black, and perfectly white, as well as green (ripe), and various shades of yellow. In size, also, the various kinds differentiate. Some are of enormous length and bulk, while others are but a few inches only, and some of the smaller kinds are exceedingly sweet. Those in Java and Borneo are highly superior. A different fruit altogether, but one which varies greatly according to the soil, climate, and country in which it is grown, is the familiar Orange. Several naturally lay claim to be the best, but if one can impartially go behind the chair, may probably be given equal precedence. Thus in Jericho, where the Orange comes in about the earliest, owing to the sub-tropic heat (Jericho being situated in the depressed plain of the Jordan, immediately under the Jerusalem plateau of mountains, and 2500 feet beneath the level of the Mediterranean), the excellence of Jaffas, compared with those here, was laughed at, the Jericho products being claimed as the finest in creation. Certainly they were wonderful both in size and flavour. They are unhappily but little known, as they will not stand transportation. Visiting its rival, Jaffa, not long after, I had full opportunity to wander about the Orange and Lemon groves, and taste the finest samples of the former. A very beautiful sight is that of the acres and acres of Orange plantations when in the full bearing of their golden balls of fruit, and the scent, as may be imagined, is a delicious one. How absurdly cheap native fruits may be bought on the spot, thought comparatively luxuries here in England, may be exemplified by my stating that on leaving this Syrian port I was offered by a seller a good sized hamper of "Jaffas" for a franc. Not being able to do with so many, however, I took the most I could, and indeed more than enough to last out the voyage, and still supply my friends, for the modest sum of the equivalent of about a quarter of a franc.

I suppose one's taste differs from time to time, or we ungratefully forget past pleasures, but in travelling through America I thought I must really give the palm to the luscious and pipless Florida Orange. In this magnificent fruit (both in size and flavour) I seemed to have attained the climax in Orange eating. The Californian Oranges, too, are very fine and grateful to the taste. And here mention must be made of the Tangerine, produced so largely along the coast in Northern Africa. Both in Algeria and Egypt I have enjoyed many an *al fresco* lunch off these graceful little fruits; for the native penny you can stuff your pockets as full as you will, and yet have paid handsomely for your bargain. Spain furnishes some good fruit, and excellent stuff in the form of Sevilles, for preserving purposes; but in Southern France and Italy the product for the most part is tasteless, bitter, or immature, though in the last named country doubtless there are a few districts where the fruit is pretty well.

The Date, as I have hinted above, is of a very high class character, exceedingly sustaining and wholesome withal, and can be eaten continuously even by those unaccustomed to it, without the aid of other foods to keep the system in order. The average traveller being in Date countries during the winter and spring, when the fresh Date is no longer obtainable, has to fall back upon the dried product, a very excellent substitute, but only comparable to the former as the moon is to the sun. The Guava of India and the Islands of the Equator is not, as a ripe fruit, much accounted of, though manufactured into jelly it is highly esteemed. It is not a bad fruit nevertheless, if you can acclimatise yourself to the curious smoky sort of taste inherent to it. Passing to Japan for a moment, the Persimmon, a gigantic sort of Plum, resembling in shape a good sized oval Tomato, claims a passing attention, having a fine flavour and keeping properties, which has caused it to be tried for transportation to our own country just now for the first time, and being one of the few flowering growths the Japanese cultivate for fruit, rather than for the sake of the blossom. The Plum, Cherry, and Peach are largely sacrificed to their innate love of flowers, and have their branches ruthlessly lopped off in all directions accordingly during each flowering season for decorative purposes, whether in their processions, their houses, or for their temples and idols. The Persimmon is also a good deal used for preserving, and in this form is an exceedingly delicious compôt. Such eastern fruits as the Pomegranate and Prickly Pear, though partaken of largely by the natives, and also numerous products of the Melon class, can hardly be considered fruits of the highest quality. Both, however, are readily obtainable in the English markets at certain times of the year.

In the way of Nuts, the dainty little Lychee (or Litchi) of China has its own attractions, and this, too, may often be obtained during the winter season from our Oriental retailers. As regards the Fig, probably it differs not very much in flavour from that produced under favourable circumstances in the south of England, still in Fig-growing countries, such as Palestine and Turkey, and elsewhere, some

of the finer-fibred ones must be admitted a decidedly superior article and in Constantinople in particular, and Algeria, southern Italy, and Spain, I have tasted fruit of very great delicacy.

The huge areas of territory devoted in foreign and Eastern lands to the cultivation of the Grape hardly enter our present sphere of contemplation, being grown as it is almost entirely for wine, or its dried form in the shape of Currants and Raisins. Neither can the best of them compare for a moment with our highly cultivated English hothouse article, which, under proper auspices, become such superb fruit. Indeed, I venture to think few tropical or other foreign fruits can compare with our own ordinary garden productions. Still comparisons are generally unsatisfactory and unfair, and doubtless Nature has provided her own fruits in each particular spot to suit the soil, climate, and requirements of the denizens thereon.—J. A. CARNEGIE-CHEALES.

The Primula and Cineraria.

How long these plants have occupied in their season prominent positions in the greenhouse I am not prepared to say. My knowledge of them goes back some years, and in the days when Azaleas were trained, hardwooded plants so popular, and gigantic stove plants so highly prized, the Primula and Cineraria held their own; and commonplace though they were in the way of strain and varieties compared to now, gardeners took a delight in them, and for the adornment of greenhouse and conservatory they were considered indispensable. Their popularity has never waned; on the other hand it has grown, and for this, I think, thanks are due to those who have done so much towards the development of the flowers. There is no such thing as standing still in these days. A plant that will not lend itself to improvement occupies its own place, which is not so high in public estimation as in the case of those subjects that have capacity for development.

In this respect neither the Chinese Primula nor the florists' Cineraria have been found wanting. Compare the strains of to-day with those of twenty years ago. The flowers are larger, colours more varied and brilliant, plants more robust; all brought about by intercrossing, selecting, and the survival of the fittest. The accommodating character of the plants has increased their popularity. As annuals they are raised every season; a small packet of seeds will produce a batch of beautiful specimens, and, with the exercise of care, the amateur can grow them as well as the professional. But of late years neither the Primula nor Cineraria has, in one particular sense, pleased as it used to do. Public taste has risen in opposition to stiffness and formality in habit amongst flowers. The gardener has found out how this has affected the plants in question. My lady admired the Primulas and Cinerarias in a way; they were very showy, the colours beautiful, but the plants were a little stiff, you know. She would like them better if they were free, threw their flowers up more, and less conformed to one rule of habit.

But Cineraria polyantha and Primula stellata are free-growing varieties, and intending growers had better be advised, now the sowing season is coming along, and secure a packet of each. The former is, I believe, the result of a cross between Cineraria cruenta and the old greenhouse form, and the cruenta hybrids have charms hitherto undeveloped in this popular family of plants. Their flowering season is just over, and after a stiff trial their place is assured. The individual blooms are star-shaped and smaller than the ordinary form, the large heads of flower are produced on long stalks, which renders them highly suitable for decorative purposes, and many delicate shades of colour are displayed in a batch of plants. One more point—their usefulness for cutting. This is strongly in favour of the latest departure in Cinerarias, for they come in at a time when the demand for cut flowers is great, and the supply none too plentiful. Will the new Cineraria supplant the popular old favourite of the greenhouse? I hope not. There is room for both; but the latest departure has already proved its indispensability.

Primula stellata is now sufficiently well known as to hardly need description. It has quite a distinction of its own; the dark red foliage contrasts favourably with its numerous star-shaped flowers borne on long stalks, and filling up the gap of true gracefulness that was hitherto apparent amongst greenhouse Primulas. For conservatory and table decoration Primula stellata is a most suitable plant, and for the latter use it surpasses the old *sinensis*. The flowers are of longer duration than most varieties, and they are useful for cutting, which, by the way, is a failing of *P. sinensis*. The original stellata has already been improved upon, named varieties have sprung into being, and it seems as though the departure holds out possibilities for further developments in the future. In them there is a splendid combination of grace and beauty, the outcry for freedom of habit and less stiffness is effectually silenced, and they illustrate the development of the greenhouse Primula. What yet lies in front we cannot say.—G. H. H.



The Week's Cultural Notes.

When a house is set apart for the Mexican section of *Laelias* it is an easy matter to treat them exactly as they should be, but when they are mixed up with others in the *Cattleya* house, it is difficult to give them sufficient sunlight and air without damaging the foliage of the more tender kinds. In the latter case I have found it beneficial to place *L. majalis*, *L. purpuracea*, *L. anceps*, and on occasions *L. albida*, outside in the full sun in order to thoroughly consolidate the growth. Naturally it will not do to turn plants out that have been growing in a moist and shady house, as the foliage would suffer, but if the growth has been made in ample light and air the plants will take no harm.

That grand species *L. superbians* is never satisfactory in small houses that have to be heavily shaded; but in a large or comparatively large house, where ample light and air may be given without injury, it is usually thrifty. *Broughtonia sanguinea*, again, likes similar treatment, but perhaps rather more warmth, and a good drying occasionally in the middle of the day. This is also very suitable now for the West Indian heat-loving *Oncidiums*, all of which delight in having their heads up close to the light, and with plenty of atmospheric moisture morning and evening. Where the small growing clinging species of Orchids, such as *Ionopsis*, *Burlingtonias*, and some of the lesser types of *Dendrobiums*, are grown on blocks, rafts, and other contrivances, there is often an insufficiency of moisture in the air, and this should be counteracted as far as possible by syringing the plants morning and evening, and lightly dewing again several times in the day should it be very hot. Watch the compost meanwhile, and see that this does not get soddened, or the roots will be killed.

Newly imported plants of the pretty *Laelia grandis tenebrosa* must not be stinted for moisture, for it is a singular point in connection with this species that it will take more water than many stronger growing kinds. With others it will be necessary to use great caution, especially until roots have formed, or the basal eyes will decay and back breaks will have to be depended on. In all departments, whether cool or hot, growth, of course, is the order of the day, and everything possible should be done to encourage this. Early closing is advisable on sunny days, and the damping of every dry spot in the house; also occasional moistenings with liquid manure or soot water. The presence of ammonia in the atmosphere is very stimulating to the growth of all Orchids.

Odontoglossum grande.

This fine Orchid is now growing freely, and the flower spikes will soon be forming, so that especial care should be taken that no check is given. All this class of Orchids are easily incommoded during hot summer weather. In their native country the temperature keeps much more steady; there is not so much rise and fall as with us, so that, although in winter they pine for the light that we are not particularly well blessed with at that season, in summer heavy shading and plentiful moistening of the atmosphere is necessary. The roots will now be seen to be very active, a sure sign that nutriment in plenty is needed. These, then, must not be allowed to get dry for long at a time, or the pseudo-bulbs will be small and finish prematurely, the flower spikes being correspondingly weak. Light dewings over the foliage, the air being at the same time kept moving about them, will insure their well-being. *O. grande* is one of the finest, if not the finest, species in the genus, its rich yellow and brown flowers making a grand display on well-cultivated specimens. The plants should be potted in a loose open compost with plenty of rough lumps of charcoal and crocks to insure aëration. It is a native of Guatemala, introduced in 1839.

Odontoglossum maculatum Thompsonianum.

A first-class certificate was awarded to this remarkably large and handsome variety of this pleasing Mexican species at Chiswick, on Tuesday, July 16th. The plant had eight large, finely formed flowers of great substance and superior colouring. The inflorescence was stout and over 20 inches in length. Our illustration shows the exact size and form of this pretty var., which was staged by W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffordshire. The sepals are salmon brown, margined with yellow; petals and lip pale yellow, blotched with brown.

Epidendrum fragrans.

Though not a showy Orchid, this species is very distinct and attractive. The inverted shell-like lip, a characteristic it shares with *E. cochleatum* and one or two others, is pale creamy yellow, with radiating lines of violet purple. As its name implies, the flowers are very fragrant, and if properly treated the plants are very free flowering; but if always kept in a moist warm house the probability is that no flowers at all will be forthcoming, growth following growth in quick succession. What it needs is a distinct resting season in a cool, dry atmosphere after the growths are complete, this insuring flowering growths the ensuing season. Ample light and air during the summer, and exposure to the full sun in autumn, is also necessary.

Regarding the roots, these are easily managed. They object to a great thickness of compost, and delight in ample drainage; if the pots are filled for two-thirds of their depth with crocks, and a little rough moss placed over this, there will still be plenty of room for compost. During the time growth is active a full supply of moisture is needed both overhead and at the root, but while at rest only sufficient to keep the pseudo-bulb from shrivelling is necessary.

Bollea coelestis.

The *Bolleas*, *Warscewiczellas*, and *Pescatoreas* form a very interesting section of bulbous Orchids, the only drawback being that they are rather more difficult to grow and keep in health than the majority of pseudo-bulbous kinds. This *Bollea* is, perhaps, as good a grower as any, and on this account may be recommended, while it is really one of the most beautiful of all. The flower spikes are upwards of 1 foot in height, usually bearing a single blossom, this being a very pretty light blue tint with purple and violet shading. It thrives best in a fairly warm house as near the glass

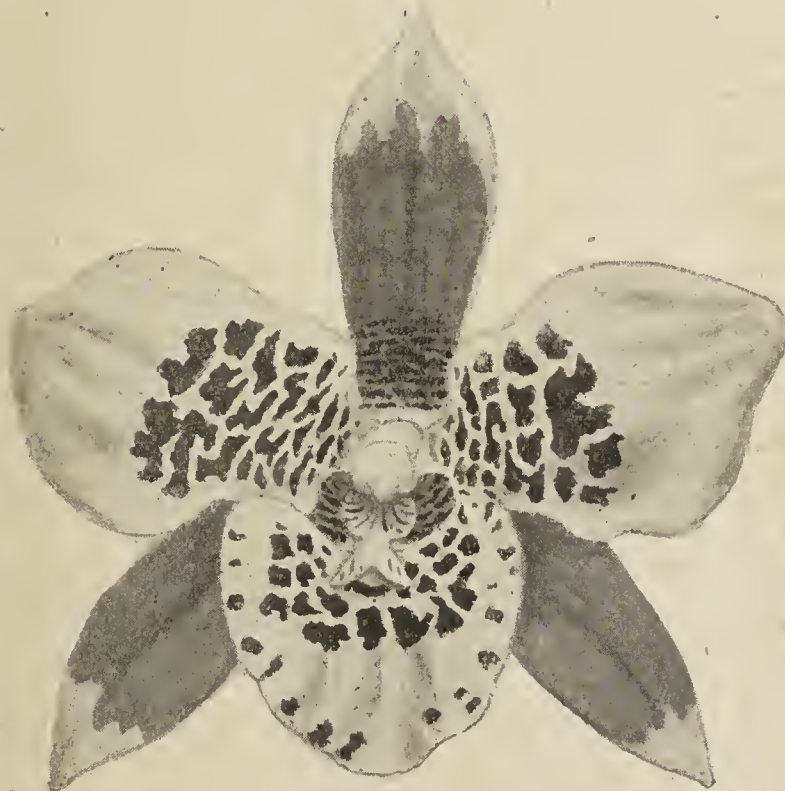
as possible, but with a broken light. The tender foliage is not able to stand sunlight, but delights in being under the shelter, so to speak, of larger plants, while at the same time enjoying the light. The atmosphere must always be kept very moist, and the roots like moisture too, but they like it fresh, and anything like close or sodden compost is very distasteful to them. Sphagnum and crocks, with a very little loam, suits them better than peat. In winter the roots must not be dried, as, having no pseudo-bulbs to retain the nourishment, the plants soon suffer. A flat-trellised raft or basket is better than a pot for it. *B. coelestis* is a native of Colombia, and was introduced in 1878.

Phalaenopsis Manni.

Although small the blossoms of this species are very pretty and bright, and it may well be added to the choicest collection. They are creamy white with chestnut markings on the sepals and petals, and purple on the lip. It is an Indian species, and I have seen it thriving well in the same house as the Burmese *Dendrobiums*, the latter being removed for their resting season. Not much compost is needed, and a little new moss should be added annually. The best time to do this is about April when the plants begin to grow freely, the temperature at the same time being slightly increased.

Dendrobium speciosum Bancroftianum.

As compared with the type, this is a far prettier and more elegant Orchid, and a point in its favour is its less bulky habit. It does not appear to be very widely known or grown, but it is worthy of every care. It does best in rather less warmth than *Dendrobiums* generally, and endeavour should be made to ripen or consolidate the growth



ODONTOGLOSSUM MACULATUM THOMPSONIANUM.

gradually rather than to make violent changes in the temperature with this end in view. A few weeks' exposure to the open air in late summer is an advantage, provided the growths are properly finished, but not otherwise.

Cirrhopetalums.

The pretty flowers of these Orchids are produced in compact, round umbels on thin wiry scapes; many of them are rich and telling in colour, and they form a very interesting genus. Their culture presents no special difficulty provided sufficient heat is at command, but they are seldom satisfactory in a cool house. They grow freely in a compost of equal parts of peat and moss with a sprinkling of charcoal and potsherds. Only about one-third of the depth of the pot is needed for compost, the rest being filled with crocks for drainage. During the summer months the roots must be very liberally watered on hot days, sometimes as often as twice; but in winter, when at rest, far less is needed, though nothing like the drying off practised with *Dendrobiums* and similar kinds is admissible. The point is to study the plants and the weather. A plant that shows the least sign of shrivelling should at once be watered, and more moisture will be necessary on cold, bright days, when the fires have to be pushed, than when damp and close or foggy. Shade in summer, and all the light possible in winter, will insure their being satisfactory. There is a large number of species in the genus known to botanists, but only a few of these are generally grown. One of the most distinctive of the species is *C. Cumingi*, which has been known in collections since 1841. It is one of the many rarities imported from the Philippine Islands by Mr. Cuming, after whom it was named by Dr. Lindley. It flowers readily in early spring.—H. R. R.

Town Trees.

THE trees in our large towns have many adverse influences to contend against, such as—1, Over-drained soil due to the wide and deep trenches made for laying sewage, gas, water, and other pipes, the roads or streets being cut lengthwise and crossway by a series of loosened earth trenches, which, however firmly rammed, accelerate the downward passage of water, and equally retard its ascent by capillary attraction in droughty periods. 2, Poor or stubborn soil, in consequence of the removal of the ameliorated surfacing mould a foot or more in depth to make room for laying down the roadway and footpath materials. 3, The exclusion of air and water to the roots by the impermeable road coverings; the rain water, instead of sinking into the soil, being conveyed off as rapidly as circumstances admit by surface water-drains. 4, The heat reflected from the large areas of slate and tile, brick and stonework. 5, Coal smoke and gaseous impurities arising from factories and chimneys.

Of the five adverse influences, the effect of drought at the roots and the heat of the atmosphere is clearly marked upon several species of trees in hot weather. To these attention may be usefully drawn as a lesson that ought not to be neglected by corporations and those in charge of streets, squares, and gardens; for, although the heat and drought has been somewhat excessive this year, trees in large towns are always, as was remarked to by Sir Herbert Maxwell in the "Times," and quoted in the *Journal of Horticulture* of September 28th, 1893, exposed to greater summer heat and drought than those in the country.

Lime Trees.

The trees which have suffered most are the commonest, the Lime taking precedence. It is, perhaps, the most tractable of all trees for submitting to manipulation of its head, being made to form a screen of determinate height and breadth, hedge, arbour, or mop-shaped, and kept thereto for an indefinite period. Another reason of the prevalence of the Lime in towns is that of its being planted at a time when the sites were not confined, and soot, and smoke, and noxious gases did not abound. But owing to the exodus of the population from rural to suburban and urban districts, and the advance of the country in industrial energy and progress, these open town situations have become more or less confined by the erection of dwellings and factories, the smoke and fumes correspondingly more demonstrable, the soil moisture reduced proportionably, and the air heat and concomitant drought relatively increased. Thus, in the course of a few years, towns comparatively rural become decidedly urban, and where once the Lime thrived and retained its foliage in health up to October or later, it now turns sere in August, and is more or less leafless early in September. As the smoke and fumes increase with that of summer heat, and the soil moisture diminish, the Lime shows marked signs of distress, the tops of the branches dying off, and sooner or later the whole tree succumbs to the adverse influences; avenue trees the

soonest, and the topped, because annually or frequently rejuvenated, the latest; yet all "get smaller by degrees and beautifully less."

In the country-like town of St. Albans, where the Lime is practically the only public road or street tree, a convincing proof exists of town planters being very circumspect in selecting species for subjection to the impurities of a town atmosphere, not only in the smokiest, but even in the most countrified. Now there are the Lime and Lirres, to which I may first revert in respect of their doings in 1899, these being similar to those of 1893. The common Lime (*Tilia vulgaris* or *europæa*) was seriously distressed in August, red spider (*Tetranychus tiliarum*) having put in appearance and indicated its presence by browning, curling, and falling of some foliage. Many of the trees were almost, and some quite, leafless on the 9th of September, very few being decently clad in summer garb, the most retaining remnants only of brown or sere foliage.

The broad-leaved Lime (*T. platyphyllus*) has a much finer general contour, is hardier, and less subject to attacks of red spider, as well as retains its foliage later, than the common Lime. Hardier still is the red or orange twigged variety (*T. p. aurantia*), it doing better than any other species or variety in an exposed position 500 feet above sea level; for, remember, Limes are trees of the plain, moisture loving, but not on cold, heavy, wet soils, alluvial flats being more to Lime tree taste. Better still for bold contour and beauty of appearance is the petiolate, sometimes called white, Lime (*T. petiolaris*). It has an erect stem and leafy pendulous branches, very handsome, retaining the foliage longer and freer from red spider. The leaves are large, dark green above, silvery beneath, the flowers yellowish green, large and fragrant; bees make it "a hive," as the species flowers just after the commoner broad-leaved and common Limes are nearly past. Hence the Limes in variety give a long bee season.

The white or silver Lime appears less hardy than the petiolate form. It (*T. argentea*) has the foliage browned more or less in exposed situations by late spring frosts. The foliage is bold, somewhat round or cordate, pale green, shining and smooth above, white downy beneath, and the yellowish white flowers are very fragrant. When ruffled by wind the tree has a very silvery appearance. The leafage suffers less from red spider and reflected town heat than the other species of Lime, but the silver Lime appears too tender for any than sheltered and warm situations in this country.

The American Basswood, or Whitewood (*T. americana*) grows freely, but not so strongly as the broad-leaved Lime, the deeply cordate abruptly acuminate smooth leaves being sharply serrated, and turn yellowish-brown in decay. It appears to stand town heat better than the broad-leaved and common Limes, but the specimens noticed have not been in very adverse influences of smoke and fumes. No observation has been given of the American white Basswood or variable leaved Lime (*T. heterophylla*) in smoky districts, its large leaves, 4 to 8 inches in diameter, being green and shining above, very white and velvety tomentose beneath; and evidence has not been forthcoming of the very large leaved and vigorous growing Blech's Lime (*T. platyphyllus* Blechiana).

The heart-leaved Lime (*T. cordata*), though, perhaps, a native of this country, like the broad-leaved, contends less effectively against smoke, fumes, town heat, and drought than the common Lime, although its leaves are quite as smooth above and not more pubescent in the axils of the veins beneath. As compared with the broad-leaved and common Limes, the heart-leaved, generally with leaves smaller than either, is a small tree, and flowers last of the three. Of all the Limes, the heart-leaved appears least able to resist the adverse influences of coal smoke and reflected heat, the leaves curling up in July, and red spider turning them quite brown. There are often singularly ruddy by mid-August, and fall by the end of the month, the trees being leafless early in September.

I have dwelt at length upon the Limes, as they appear most generally selected for town planting, probably owing to early ideas derived from the Low Countries; but of all trees they are the least commendable for planting in smoky districts. In towns of a decidedly rural character, with wide streets, and the surface coverings not impermeable to air and rain, Limes may, and do, succeed, providing the district or site be not noted for dryness of soil and aridity of atmosphere. Under dry earth and arid atmospheric conditions, Limes suffer from aphid attacks in the early summer, especially after east winds have blown, and the pavement beneath the spread of their heads is coated over with honeydew, the filthy excreta of these pests, affording a nidus for black fungus, *Fumago vagans*, and may-be for microbes. Then the foliage is coated on the upper surface by the insects sucking the life blood from the under side of superjacent leaves, clogging it with glue-like substance, anon turning black, and giving the trees a woeful aspect. Apart from red spider, which certainly follows if the season is dry, the leaves so affected ripen and fall prematurely, so that Lime trees seldom, from one cause or the other, can be depended upon to retain foliage pleasing to the eyes after August, and sometimes not even in that month.—G. ABBEY.

Falkland Park.

LYING almost due south and close by the Crystal Palace is Falkland Park, the private residence of C. Hay Walker, Esq., comprising some 30 acres of ground of varied conformation, 20 acres of which are included in the gardens. The latter are supervised by Mr. W. J. Simpson, a man noted as a first-rate hardy fruit and vegetable grower. From the appearance of Orchids and other tender exotics in the glass houses, his skill as a plantsman is not inferior. At a recent visit to this interesting demesne the vegetable section of the garden attracted attention. On a sunny south Vine border an abundant crop of early Peas were swelling, and will ere now have afforded some luscious dishes. The variety in this instance was Sutton's Excelsior, while in the open brakes the Selected Duke of Albany and the dwarf but robust Early Giant were each strong and abundantly set. Spinach is grown between the Pea rows.

The earliest plantings of Celery were just about to be made, and a special trench is allowed for each row of plants. Undoubtedly where space can be afforded this crisp and juicy vegetable should have freedom, and ought in this respect to be treated liberally. Needless to say the Celery ground is not merely dug, it is deeply trenched, and much good dung is incorporated. The young Celery plants, by the way, are grown individually in pots, and when they are well established in the 3-inch size they are then ready for planting out. The Cocoa-nut Lettuce is the variety favoured at Falkland, and I am not sure that any other variety finds a place. It is the same with Tomatoes; either indoors or out, two kinds only are cultivated—namely, Sutton's Eclipse and The Trophy. Every grower finds a favourite variety, and though each may differ from the other, yet, according to the partisans of each, his own pet is *par excellence* the best. Lockie's Perfection Cucumber is grown, and this supplies all needs. It produces fruits of even size and moderate length, which latter characteristic affords it value and usefulness in the eyes of those for whom it is here grown.

Returning to the vegetable garden, Mr. Simpson pointed out a new variety of Rhubarb that promises excellently. This is named The Sutton. It has the qualities of being speedy in establishing itself on any selected and well prepared piece of ground, and throws up long, stout, red-skinned stalks. Some of the stalks, indeed, were over 3 feet in length, and thick in proportion. It is not so juicy as Champagne, for instance, but it has an agreeable pungent flavour. It is much respected by the head gardener at Falkland, and from what I saw of the variety it appears to be a capital and useful addition.

The hybrid Bean, produced from crossing the Dwarf Bean with the Scarlet Runner, and now called Sutton's Hybrid Dwarf Bean, was here in frames. The dwarf habit and free flowering qualities, combining, too, the Marrow flavour of the Runner Beans, furnish a trio of commendable qualities. Onions, Carrots, Parsnips, and other crops were healthy and vigorous, notwithstanding the light soil and the late prolonged drought. Mr. Simpson was anxious to have rain, so that the Brassicas for winter supply might be placed in their permanent positions. Speaking of dryness calls my attention to the parched state of some of the lawns at Falkland Park, while other portions of the grassland were quite green and fresh. But these latter had been preserved in their pristine condition by the use of London street sweepings (horse droppings) as gathered by the scavenger boys. This manurial stuff is, in London, first of all emptied into upright pillar-like bins placed at intervals along the main thoroughfares, and into which the boys empty

their gleanings. When the bins are full the scavenger carts come along and relieve them, so that the matter is kept free from indecomposable substances, and is in a fit state to sell for garden purposes. The Falkland Park folks have, then, used this in its sifted condition on part of the lawns, which, after being watered in and the surface repeatedly swept, disappears downwards with eminently good results. It only costs 3s. per load, including cost of transit.

Hardy fruit trees presented very satisfactory prospects. Plums are well fruited, as are Apples, though the Pears had suffered from the effects of a cold, easterly blizzard at the time when their flowers were fully expanded. Vines, on the whole, were good, and bearing serviceable bunches of average size. Blackland Sweetwater had, perhaps, finer bunches than any of the others, but this variety naturally furnishes a massive bunch. Madresfield Court had ripe and well-finished bunches. Pointing to a few young rods, Mr. Simpson showed me that he keeps the laterals pinched along the whole length of wood, and the purpose is to build up the buds and the growth as these are made. He impresses on one the value of "building up the wood," and by this close manner of pinching he secures his end. Again, instead of cutting down the year-old canes which I saw, he will take a crop from 14 feet of their length next season. Whether the strength and lasting qualities of the Vines suffer from this early fruiting, I am not prepared to say.

In the Orchid houses there were some handsome *Cattleya gigas* in bloom. Seldom have finer flowers been seen than some of those borne by the specimens here. *C. Acklandiae* was dotted about, and with its curious purplish lip, and brownish, spotted sepals, formed a charming subject. *Dendrobium moschatum*, with its crimson-blotched, pouch-like labellum, and massive sepals and petals, was another attractive member, as was *Oncidium flexuosum*, *O. concolor*, *O. citreum*, and *O. Papilio*. About a score of healthy *Miltonia vexillaria* adorned a portion of one of the houses; and hard by there were many of the dark flowered *Cypripediums*. *Cattleya Mendeli* and *C. Mossiae*, together with handsome *Sobralia macrantha*, *Thunia Bensoniae*, *Aërides Fieldingi*, and a grand display of *Odontoglossum crispum* in a separate, long, span-roofed cool house, each drew special attention to themselves. The collection of named Fuchsias and Colens were splendid samples of culture. The best of the Fuchsias were *Anrora superba*, *Swanley Gem*, *Charming*, *Wave of Life*, *Mrs. Marshall*, *Warrior King*, and *Lamennais*. As a corridor plant trained to a wall, what beats the rich scarlet *Pelargonium Henry Jacoby*? It was magnificently represented in the long, cool corridor at this place; so also was that lovely, pure white *Solanum* named *jasminoides*. The flowers hang in



CIRRHOPETALUM CUMINGI.

pendent clusters, the stamens in the centre being yellow; altogether it is a grand indoor plant, and ought not to be lacking in any garden. And what a beautiful and odorous plant is the Cherry Pie (*Heliotropium*) when also employed as a wall climber; it is withal so very useful. Before concluding I would like to mention how very handsome were some plants of *Acalypha Macafeeana*, grown in 6-inch pots, and suspended by a wire near to the glass, in a span-roofed house. The foliage was of enormous size, and more brilliantly coloured than I have ever seen this favourite foliage subject. The presentment of the gardens reflects to the credit of Mr. Simpson and his assistants.—D.

Trap Lanterns for Insects.—This scheme for destroying insects is very plausible, says "The Canadian Horticulturist," as a substitute for spraying, but the difficulty with it is that nearly all kinds of insects are attracted by the light and caught in the trap. Some of them are friends of the fruit grower, while the codlin moth, the most injurious insect, is the least liable to be caught.



Stings of Nettle.—It has been found that the pain caused by the sting of Nettle is due partly to formic acid and partly to a chemical resembling snake poison. The Nettles found in our fields or forests are comparatively harmless, but in India, Java, and elsewhere there are varieties the painful effects of which last weeks, and in some cases months, like snake bites.

Coleus thyrsoides.—It is now, when the plants of this handsome variety are out of bloom, that a reminder may be appreciated by growers. Anyone who saw the grand batches put up in the Drill Hall by Messrs. J. Veitch & Sons and others, in the depth of winter, will be the better able to value this beautiful blue flowering conservatory subject at its proper worth. It is simple to cultivate, free in flowering, and lasts a very long time even when subjected to knock-about conditions. Young plants can be grown in cold frames during summer.

Table Decorations.—These are always attractive for ladies, and they may learn what to avoid and what to follow in this matter. The error which they have to avoid is that of overcrowding; the two points at which they have to aim are simplicity and lightness. These qualities were excellently seen in the table arrangement of Miss West of Reigate at the late Rose show in the Temple Gardens, who is evidently not only possessed of good taste, but knows how to carry it into practice. Mrs. Orpen's was also, as might have been expected, very simple and elegant, although, as the Roses have to be placed upon a white tablecloth, perhaps a little more colour is advisable, and several others were very pretty and light. The variety used was *Rosa macrantha*, with large, single, pale blush-white flowers.—D., Deal.

A Group of Lilliums.—All the land has by this time heard of Messrs. Wallace & Co.'s splendid exhibition of a Lillium group in the great vinery of the Royal Horticultural Society's Chiswick garden during the two days of the conference there last week. The Floral Committee unanimously awarded the exhibit a gold medal, and coupled with it their heartiest thanks for the effort Messrs. Wallace & Co. had put forth. It must have entailed a huge amount of forethought and action to have furnished so massive and numerous a collection. Without this selection, the show, in conjunction with the conference, would have been a fiasco. For the gratification of our many readers who had no chance of visiting Chiswick, an illustration of the Wallace group, inadequate as it is, is here furnished. Fifty-seven species and varieties were presented, the names of the more striking of which were printed in our report on page 61 last week, and these we suggest, ought specially to be noted for future reference.

Filling in About Trees.—The filling in of soil about trees in some cases, and the leaving of them elevated in others, are, says Mr. Jos. Meehan, problems which frequently present themselves to the gardener. Neither one is good for trees, being unnatural. The burying of the trunk which usually follows filling in, is something Nature never intended, and when done evil consequences follow. The burying of the roots far lower than they desire is injurious, because of the lack of air which the roots meet with, and which air they require. But should the filled-in soil be porous, so that rains can penetrate easily, there will be no serious loss from that cause. The burying of the trunk is sometimes avoided by building up around it a dry circle of stones some distance from it, which is as good a thing as can be done. The next best thing is to fill in around the trunk with stones or sand, stones preferred. Besides keeping the soil from packing closely about the trunk, it permits of the rain water reaching the roots quickly; and this suggests that in filling in over the roots, loose, stony soil is much the best kind to use. Large trees will endure more filling in above the roots than will smaller ones. The leaving of trees elevated by the digging out of soil is injurious, as disturbing the conditions they had established for themselves. If the roots are not too much exposed they will in time push down deeper, and in the course of a few years find themselves at the same distance below ground they were in the first place. In damp ground roots of trees have an aversion to going deeper, and in such situations the taking away of much of the top soil exposes the roots very materially, resulting in a stunted growth, and sometimes in the blowing over of the trees in gales of wind.

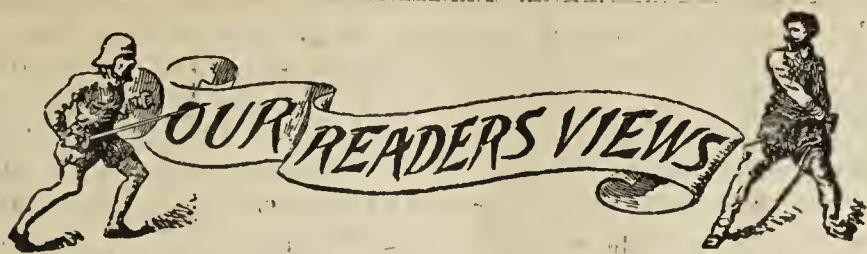
Lilium Wallichianum superbum.—A vigorous, free-growing Lily, attaining a height of 4 or 5 feet in the open air. At first the flowers are trumpet or funnel-shaped, varying from 6 to 9 inches, and, when fully expanded, about 6 inches across. At first they are sulphur or pale yellow colour, but become nearly white as they mature. It is quite a hardy species, though pot culture is often commended. The specific name "sulphureum" is applied, or has been applied, to this variety. A figure will be found on page 83.

Neglected Mulberries.—No fruit garden can be said to be complete without its Mulberry trees. To get trees to bear quickly, large branches should be cut from old trees, planted firmly in a shady border, and well mulched and watered in dry weather till rooted. It is a pity that this remarkably fine fruit is not largely grown. With a fair supply on sale, it would not be long before a demand would be obtained for one of the most wholesome berry fruits that can be grown.

Watering Rhododendrons and Azaleas.—Plants with fine, hair-like roots, such as Rhododendrons and Azaleas, do not quickly root into fresh soil, and, as the balls of earth with which they are imported are very porous, they quickly dry out the first season of their planting. In dry times they need watching to see that they are not suffering from dryness. A good watering is sure to help them, and then, if not already done, give them a good mulching of short grass or some similar material. After a year has passed they will have rooted better into the fresh soil.

Gesneras.—Many gesneraceous plants are of great value. Of those generally cultivated, the Gloxinia must be placed first. Achimenes, too, that flower throughout the summer, are easily grown and remarkably showy, while the quaintly marked blossoms of the *Tydas* may be had during the winter. Gesneras of that section, which is now often included in the genus *Nagelia*, are all very pretty. The flowers, which are of different shades of white, yellow, and pink, are borne throughout the summer months. The pretty, velvety appearance of the leaves is also another notable feature of the Gesneras. Their cultural requirements may be briefly summed up thus:—After their flowering season is over they perfect their growth and then go to rest, at which period scarcely any water should be given. Then on the return of spring they should be turned out of their pots, and the curious underground rhizomes or tubers picked out of the old soil. A very suitable compost for them consists of equal parts of loam and leaf mould, with a liberal admixture of silver sand and well decayed manure. In potting, the upper part of the tuber should be just covered with the soil, which must be kept slightly moist till growth recommences.

The Chemistry of Artificial Flowers.—Many persons have been rudely shocked to find that a flower for which perhaps they gave a considerable sum, and which they took to be genuine, proved subsequently to be artificial in every particular. Within our own experience not long ago the attention of a gentleman sitting at dinner was drawn to the fact that his shirt-front and coat were gradually being covered with streaks of a brilliant red colour. He was wearing a bright Carnation in his buttonhole, which at quite a short distance, as it subsequently appeared, deceived perfectly. Even the perfume was admired. The "flower" had just been watered to freshen it, and it was then seen that on the water-drops detaching themselves they were of a brilliant red colour, while the "Carnation" gradually assumed a faint variegated appearance, owing to some of the colouring matter being washed out. General incredulity was expressed that, at first sight, the flower could be anything but real. A laboratory examination, however, soon brought the whole truth to light, and the results are remarkable, and certainly a credit to the ingenuity of the designer. There was not the vestige of a Carnation about it. The "flower" consisted of slices of Turnip neatly cut, and dyed with acid magenta; the stems and leaves were of twisted cloth, dyed a dark green with chromium; the bloom was a very fine starch powder, delicately dusted over the stems and leaves; and the support to the whole clever fabric was a concealed iron wire. A synthetic amber-coloured oil known as "coilet" completed the deception in giving a perfume wonderfully imitative of the genuine Carnation. Altogether we can hardly conceive of a cleverer deceit, and it is satisfactory to be able to add that, so far as our observations went, it is free from positive harm, except to wearing apparel. On carefully searching the various materials for irritating substances and poisonous metals we could not obtain the slightest evidence that such were present. It is clearly possible, however, that the colours used for artificial flowers may contain substances injurious to health, such as, for example, arsenic.—("Lancet.")



Sweet Pea Culture.

In answer to the letter received from you asking for hints on Sweet Pea culture, I consider the most important details are:—Good seed, deep trenching, and thorough cultivation of the soil, and it is very important to get the seed or plants in, when the ground is in good condition. The roots should have every encouragement to go down; there should be no fertilisers near the surface; in fact some of them destroy the germinating power of the seed. I also condemn the use of water on the surface; the continued use of the hoe, by keeping in the moisture already there, is of much greater benefit.

A light syringing of the foliage on warm nights when there is no dew is also very beneficial. I would like to take this opportunity of expressing my condemnation of the practice of some growers who thin their plants to one shoot. I recently saw some of these unsightly, lanky plants, with just a bloom and a bud at the top of an ugly piece of bine 7 feet high. You must let the plant make its natural growth, otherwise the root suffers in proportion to the bine taken away.—P. WATERER.

Autumn-sown Sweet Peas.

As "A. W. C., Devon," is probably not alone in wanting to hear the measure of success attained by some who adopted the method I recommended in an article in your issue of 8th November, 1900, my own experience may be of interest. The Peas were planted out as soon as the severe weather was over at the end of March, and, notwithstanding the cold spring, were coming into bloom at the end of May, and are still (15th July) in full bloom, many of the flowers being three on a stalk, and some even four. They have had two or three good waterings during the last month, the drought with us in Essex being very severe. In addition to this, all the seed pods have been picked off daily. They are 6 or 7 feet high, and are flowering nearly all the way up from the laterals which strong-growing Peas produce.

The first secret of success is deep cultivation, and it is worth while to dig out a hole or a trench 2 feet deep and fill up with good soil. Animal manure can be mixed with the soil or not as desired, as nitrogen, though not essential to Peas, is always useful to retain moisture. If no farmyard or stable manure is given, basic slag should be mixed with the soil if it is prepared in the autumn, or superphosphate if in the spring. A free root-run enables the plants to withstand drought, gives them a larger area for collecting food, and increases the number of colonies of nitrifying organisms on the roots.—A. PETTS.

Exhibitors as Committeemen

I thought "W. S.'s" answer, in your issue of June 27th, to Mr. G. Wadeson's query, on page 525, "Should Exhibitors Act as Committeemen?" was to the point, and conclusive. But I notice in last week's Journal, page 53, Mr. G. Wadeson does not appear quite satisfied. I should not have thought of writing to you on this subject had not Mr. G. Wadeson, by using a rather favourite expression of mine, i.e., "Outside, gentlemen; all outside, please," when clearing the tents for the judges, led me to infer that his complaint was directed more particularly against the committeemen-exhibitors of the Derby Horticultural Society, and having in mind Mr. G. Wadeson's determination, at the exhibition held last September, to have the honour (p) of being the last exhibitor to leave the tents, has rather confirmed me in this impression.

I do not think it at all necessary for me to try and justify the conduct of my two colleagues or myself, for being among the number of committeemen-exhibitors. I have been for the past twenty years connected with several horticultural societies, and in various capacities at different times as secretary, committeeman, steward, or judge at many horticultural shows. I have yet to learn that the committeeman-exhibitor is mean enough to take any undue advantage of the other exhibitors by any prior knowledge he may have acquired by the alteration of any matter in the schedule, or that he has so far forgotten himself as to think that he could by his solicitations bias the judges in their decision one iota in his favour; or again, that any of the gentlemen who are officiating as judges would, for any consideration whatever, give anything but what they knew and felt to be a just decision.

I must strongly protest against Mr. G. Wadeson's insinuations both as they affect the committeeman-exhibitor, and also the judges. Mr. G. Wadeson should, when trying to point a moral, be somewhat more consistent, for he says he can with confidence recommend all exhibitors to try and get on committees. [This was meant ironically.—Ed.] And yet he tells us that he is sorry to say that some first-class gardeners are acting in the dual capacity as committeemen and also as exhibitors. He then winds up his remarks by saying that his

experience has taught him that men experienced in the art of exhibiting make the best committeemen, and adds that if the exhibitor is a committeeman he looks after his own interest, inferring that any exhibitor who agrees to serve on a committee does so from purely selfish motives. This, I maintain, is wholly wrong, and the least that committeemen-exhibitors may expect from Mr. G. Wadeson is that he will give them as much credit for looking after the interest of the society and the whole of the exhibitors with which they may be connected, as he takes to himself when acting as secretary.—GEO. WOODGATE, Rolleston Hall Gardens, Burton-on-Trent.

A Pond Weed.

Can any reader of the Journal give me any information how to exterminate *Potamogeton crispum* from a pond 3 to 4 feet deep where Water Lilies are growing? I am keeping it down by cutting it constantly off at the bottom. I have been told this "will only tend to propagate it." So far as my experience with it goes I am inclined to doubt that statement. Is it an annual reproduced by seed only, or do the roots survive more than one season? Any information I shall be most grateful for.—MARK WEBSTER *The Gardens, Kelsey Park, Beckenham.*

The Shrewsbury Schedule.

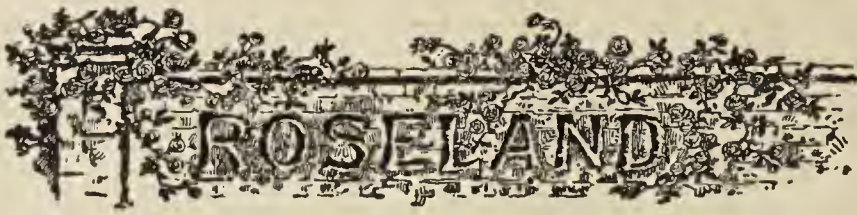
I can only wonder why such an able man as Mr. Iggulden undoubtedly is, will persist in overlooking this important fact—viz., the clause affecting class 73 in the Shrewsbury schedule, which runs, "For the purpose of this competition alone, Canon Hall (and the others) cannot be shown as distinct with Muscat of Alexandria." What more does he want? If he is a business man I suppose he feels quite right in conducting his business in the manner which he has found to give most satisfaction to those for whom he caters, without meriting public disparagements at anybody's hand. Why not let the Shrewsbury committee conduct their affairs in the way they think most satisfactory? They know, as everybody else does, that it is impossible to please all, not even if Mr. Iggulden was on the committee. I think if a consensus of opinion was taken, it would be admitted that no society in the kingdom does any better. I will say no more, Mr. Editor, and humbly apologise for my intrusion, as Mr. Crump has no need of my assistance, nor has the Shrewsbury committee, and I would help Mr. Iggulden if I could. I do not write vindictively, as personally I know nothing at all about either Messrs. Crump, Iggulden, or the others. I merely offer you the opinion of one obscure member of the gardening fraternity.—R. M. D., Northallerton.

[The matter under dispute has now been sufficiently well aired; both sides have had fair innings. The discussion is now concluded.—Ed.]

A Problem in Heating Solved.

"Aqua" has so long been "lying low," that I was agreeably surprised to see him "bubbling up again" (please excuse the metaphor) on page 29. I know not why he has deferred his remarks to this late period, unless it be because during the recent "rain" of criticism he has received more than his share of his favourite liquid, and is therefore anxious that others should enjoy an additional supply. In replying to "Aqua's" recent contribution my task is, however, particularly light, as he brings forward neither new arguments nor strong ones, but simply asks a few questions, and advances an opinion. I have no doubt that Mr. Richards will be able to answer the questions put to him in—to use a hackneyed expression—a perfectly "satisfactory manner," but before I attempt to explain "the things" "Aqua" wants to know, I cannot forbear from drawing attention to a singularly illogical assertion he makes in the following sentence. "It is perhaps needless for me to remind 'H. D.' that the air taps have nothing to do with the circulation, but only serve to allow for the escape of accumulated air." Now if this means anything, it means that air taps or air pipes are not necessary when heating is carried out by means of hot water, yet the merest novice knows that when air accumulates at any point the water at once fails to circulate properly. This, then, shows that air taps are of vital importance in insuring circulation, instead of having nothing to do with it.

Why, asks "Aqua," do I recommend the plan of dipping pipes, when I know how often they have failed to work satisfactorily? Simply because I have at last found in Mr. Marsh's plan definite conditions under which dipping works satisfactorily, and I was so convinced of the advantages of the system that I made a sketch of the arrangement, which the Editor of this paper, in the interest of readers, reproduced, and I still emphatically assert that anyone who arranges pipes in accordance with the plan given on page 378, will find the circulation is absolutely perfect. It is not, I think, a far cry from "Aqua's" allude to the familiar town of Warwick, and the only way in which he can hope to strengthen his position in this controversy is to come and discover some weak point in the arrangement. He will then, perhaps, be able to pen a note which will gain adherents far more rapidly than by predicting that the plan I have outlined will not be generally adopted, or by asserting that water will never circulate freely "down one pipe and up another."—H. D.



Crimson Rambler: Its Discovery.

Despite the many and varied introductions in the way of new or curious Roses which have either been imported or raised in this country within recent years, the Crimson Rambler may be said to have seized and retained that fickle desideratum, "public fancy," more than any other sort. Vigorous in growth, wealthy in flower and foliage, thriving in almost any situation, there is little wonder that it has come to be regarded as the premier Rose for pillar use or rambling. Wandering along the country road in the refreshing cool of the evening, we find it in a roadside cottage garden a mass of dazzling flower, which against the lustrous green foliage forms a sight worth going far to see.

Again, in the country baron's handsomely kept pleasure grounds, an arbour of the same Rose interspersed with other varieties of the multiflora type, arrests our attention, and the effect, even at a distance, is charming. With the exception of a position on a south wall in a dry soil, where it never succeeds, no Rose can be adapted to a variety of purposes with better results. Some years ago, when employed on a country estate, it occurred to me to thin out a number of wild Briers which grew along the drive and bud with Crimson Rambler at heights varying from 2 to 6 feet, inserting a good number in case of failures. The following spring I cut all over in the usual way and gently tied the young growths down in pendulous fashion. They are now fine specimens, forming what might be appropriately termed "burning bushes." Visiting a well-known horticulturist lately, our conversation drifted on to Roses, and from him I learned the true account of the introduction of this valuable acquisition, he having been at the unpacking of the original specimens.

Some twenty or so years ago a certain professor engineer found it growing in Japan, and had it sent to the late Mr. Jenner at Duddingston. From Duddingston some were given to Mr. Gilbert, a nurseryman in Lincolnshire, who grew it for a time under the name Engineer, after the discoverer. Mr. Turner of Slough, visiting Mr. Gilbert's nursery, and recognising its commercial value, purchased the entire stock, and after exhibiting it and gaining several medals, &c., at both home and continental shows, its real value for decorative purposes was fully recognised. Since then its popularity has been undiminished, and although propagated by tens of thousands annually, there is still an unbounded demand for it. Budded at this time on either the Brier or Manetti stock, it takes readily, and will make shoots 10 to 12 feet in length by the end of the following season. Cuttings inserted in a sheltered border in autumn will also make good bushes, although it will require two seasons to bring them to the same size as those treated in the former manner.—W. L., *Edinburgh*.

Maréchal Niel as a Standard.

The surest way of getting blooms of this fine yellow Rose, when wanted for exhibition, is to grow it on the Brier stem in an open position. When once established the growth is very free, and this may be trained loosely to stakes, as the Rose requires but little pruning. In an ordinary position in the open the flowers of a very early Rose become retarded somewhat; and the plant, too, has a way of not producing all the blooms at one time. It is the later ones that come in so useful for show. These, in some cases, are almost hidden among the leaves, and, as they naturally hang their heads, they are protected from sun and rain. No other Rose can take the place of this as a yellow; every exhibitor, therefore, should try to obtain blooms of it during June and July by the means above named. Half a dozen plants so treated, and doing well, will be most profuse in the way of blossom, and one is able to get a nice flower for show on any given day for a period of some weeks.—S.

Rose Le Havre

is an old Rose of the Hybrid Perpetual class that seems to be overlooked as a show flower. It is not very large, but the form is perfect. It is imbricated in shape, and the colour is clear red, deep and rich. The petals are remarkable for substance. The plant grows well generally, and its blooms come good on cut-back trees, so that this Rose is truly an amateur's flower. Where A. K. Williams does not succeed we would recommend growing the above.—S.

Rose Papa Gontier.

If I were compelled to grow one Rose only I should choose this variety. In the bud state it is a charming variety; the bright rosy crimson colour shows to great advantage, either in a cut state or when

growing in a mass. As the blooms develop the wonderful substance of the petals becomes more apparent. Altogether it is a gorgeous Rose in the garden, and one that might well be increased. The habit of growth is all that could be desired, and it is a good forcing variety, too, which is a strong point in its favour.—E. M.

Rosa sinica Anemone.

Without doubt this is one of the best of single flowered Roses. There is something in the rich tint of rose colour that pervades the silvery-pink blossoms that enhances its beauty, and renders this variety so unique in its colouring, coupled with its dark shining foliage, which emphasises, as it were, the attraction of this Rose. To grow this variety well it should have space to develop freely, thoroughly ripening its growth in the autumn.—E. M.

Rose Longworth Rambler.

I can say a good word for this climbing Rose. When making an extensive plantation two years since, a friend said to me, "Put in a plant of Longworth Rambler, and you will never be without a flower." So free is this variety in flowering, that only during the dead of winter are there no flowers. The growth is free; the leaves have a glossy appearance, which contrasts well with the deep coloured blossoms. I cannot, however, say it is nearly such an evergreen variety as Aimée Vibert; certainly not as a pergola subject.—E. M.

Certificated Plants.

It is more than a half century ago that the fine evergreen Lapagerias were imported from Patagonia, and a few years after came the white variety, which was awarded a silver Knightian medal in 1862 under the name of rosea albiflora. Like other white flowered varieties of a type it has been found, from the first attempt to raise seedlings from the white form, that while a good proportion will come true, others will come of the normal rosy scarlet colour, and others of a lighter tint. The Nash Court variety, *L. rosea superba*; the Knoll variety, and the Warham Court variety, have all received awards as fine red varieties, though probably the differences between the three are not great. It may not be generally known that *Philesia buxifolia*, at one time a somewhat popular greenhouse plant, is related to the Lapageria family, and in the early seventies Mr. Dominy raised, at the establishment of Messrs. Veitch & Sons, a hybrid between the *Philesia* and *Lapageria rosea*, which was named and described as *Philageria Veitchi*, but it does not appear to have come into general cultivation.

The Genus Lathyrus.

No flower of modern times has undergone greater improvement than the Sweet Pea, *Lathyrus odoratus*, while the perennial species have received valuable additions. Taking the latter first, it may be remarked that, as far back as 1871, the veteran William Thompson of Ipswich received a certificate of merit for *L. Sibthorpi*. It will be noted that Mr. George Nicholson does not include this in his "Dictionary of Gardening," apparently as if doubtful whether it is a true species. Mr. William Robinson, in his "English Flower Garden," claims it as a species, and terms it the Early Everlasting Pea, and as being at its best in May and June; this has flowers of a purplish red colour, and, unlike the ordinary run of Everlasting Peas, it does not exceed 2 to 3 feet in height. It is said to have been introduced by a Mr. Sibthorp. What is known as *L. latifolius*, the common Everlasting Pea, Mr. G. Nicholson states is *L. sylvestris platyphyllus*, and a fine form of this, under the name of *superbus*, received a first-class certificate of merit in 1877. In 1878 *L. Drummondii*, an early flowering form of *L. rotundifolius*, obtained a certificate of merit; it is an Everlasting Pea not nearly so much grown as it deserves to be, and it is wonderfully free of carmine coloured blossoms. *L. latifolius delicatus*, which obtained a certificate of merit in 1884, has pale ground flowers with distinct lines of pink. In 1898 Mr. John Green, Norfolk Nurseries, Dereham, exhibited a very fine large white flowered variety, and received an award of merit, under the name of *grandiflorus albus*.

There is a peculiarity about these improved or large-flowered forms of these Everlasting Peas which needs explanation. I once found in an old farmhouse garden in East Kent a very large and brilliant coloured red variety of the common form, but when a plant of it was grown in Middlesex in the best of soil, it reverted to the common small-flowered type. In like manner I have seen exhibited in the West of England a giant white form equal in purity and size to any form previously seen, but when a plant of it was brought to a Middlesex garden reversion to a small type followed. Is there some peculiarity of the soil which produces this giant character? Is what is met with under the name of *L. grandiflorus* really

L. Sibthorpi? Mr. Nicholson makes *L. grandiflorus* an annual variety, but Mr. Robinson a perennial.

The blue annual form of *L. sativus*, known in seed catalogues as *L. cœruleus* or *azureus* (or Lord Anson's Pea, which it is not, as the true Lord Anson's Pea is *L. magellanicus*), has been used in various ways for cross-fertilising purposes in order to get its tint of blue into both the perennial and annual sweet-scented varieties, but without appreciable result. When this blue form is sown in the autumn, and is grown on in pots for flowering in spring, then its peculiar beauty is seen far beyond what is displayed when the seeds are sown in the open air in spring. The annual *L. tingitanus* or Tangier Pea, with its large purple and bright red flowers, is also an interesting species.

Lathyrus odoratus.

The name of Henry Eckford will be associated with the improvement in the Sweet Pea for generations to come. It is not without significance that we should have been cultivating five or six varieties of Sweet Peas for over a century and a half before any serious attempt was made to cross-fertilise this popular annual. In 1860 James

because he had commissioned me to obtain for him all the varieties of named Sweet Peas procurable. In 1887 Eckford obtained certificates for Mauve Queen, Primrose, and Splendour; since then many awards have been made to his new varieties, though now, so far as the practice of the Royal Horticultural Society is concerned, it is customary to make an award to the strain rather than to distinct varieties.

Among English growers the name of Laxton will always be held in honour by lovers of the Sweet Pea, and the same of Burpee in the United States of America must be held in similar honour, for the firm of Walter Burpee & Co. have been the means of sending some beautiful American varieties to this country. We also owe the introduction of the Cupid varieties to the firm of Messrs. W. Atlee, Burpee & Co. They are a singularly dwarf section, but it can scarcely be said they have become favourites in this country. The tendency to shed their flowers before expansion is one of their chief faults; still they may be made to serve certain purposes in the garden, and in consequence will be cultivated. There are now nearly a dozen varieties.—RICHARD DEAN, V.M.H.



MR. WATERER'S SWEET PEAS.

Carter of Holborn offered a variety named Blue-edged, twenty years afterwards it was known as Blue Hybrid, and it was understood to have been a true hybrid between the annual white Sweet Pea and the perennial Lord Anson's Blue. It was the outcome of a series of experiments made with the object of raising a real blue flowered variety by Col. Trevor Clarke of Daventry. In 1880 Messrs. Sutton and Sons offered a variety named Butterfly, which greatly resembled the Blue Hybrid. In 1865 Mr. Stephen Brown of Sudbury received a certificate of merit for Invincible Scarlet, a selection from the old scarlet. About the same time a variety named Crown Princess of Prussia was distributed from Germany, and it proved a novel and distinct variety. It was sent out by Messrs. Haage & Schmidt, Erfurt. In 1873-74 the same firm distributed Fairy Queen, and in the same year a lilac variety, which, however, did not succeed in taking a position among varieties. In 1880 Messrs. Carter & Co. sent out Violet Queen, certainly distinct in colour, but lacking quality of bloom. Adonis was offered by the same firm in 1882, but this was displaced in 1883 by the New Carmine Rose, afterwards renamed Princess Beatrice, and to this day one of the most popular and beautiful of the rose section. I am indebted to Mr. S. B. Dicks for some of the foregoing information.

It was about 1880 that Eckford began his experiments in cross-fertilising the Sweet Pea. I was all the more interested in his work,

Sweet Peas.—To know how far to go and when to stop in the arranging of floral decorations, is one of the most essential qualifications of the person who attempts the art, and with no flowers more so than the lovely, yet fragile Sweet Peas. We watched Mr. Percy Waterer of Fawkham, Kent, setting up his exhibit at Chiswick last week, which proved to be one of the handsomest and most tastefully blended colour harmonies and contrasts, in Sweet Peas, the majority of us have ever seen, and it was there noted that he removed some *Gypsophila* that had tentatively been placed along the front edge, because good taste at once conveyed the impression that such an addition detracted from, rather than aided, the pleasing effect. The flowers were set up in ample bunches, placed at equal distances and plenty of space on all sides, above a pale, greenish yellow material of exceedingly soft texture, which was draped over the stage on which the glasses were arranged. The size of the flowers was much above the average. The varieties were chiefly Blanche Burpee, Lovely, Black Knight, Miss Willmott, Salopian, Prima Donna, Emily Eckford, Oriental, Golden Gate, Chancellor, America, Prince of Wales, Mars, Countess of Powis, and Lady Grizel Hamilton. We reiterate what our representative said in his report last week on page 60, "Each bunch was undoubtedly developed for all it was worth; and it is doubtful if finer individual blooms have ever been seen." The exhibit was accorded a silver-gilt Flora medal.

NOTES & NOTICES

Weather in London.—Thursday, Friday, Saturday and Sunday resembled each other in the intensity of their heat and oppressiveness. Monday morning, however, brought a slight change, and a brisk, cool, west breeze, and dull skies came as a welcome relief from the preceding conditions. A drizzling and very soft rain fell during Tuesday, and again on Wednesday, with still a cooler air.

A Germicide.—*Elodea canadensis*, which since 1840, when it was introduced to our islands here from North America, and has spread by vegetative means all over the country, becoming in some watercourses an unmitigated nuisance, is now said to be a germicide that checks malaria and epidemic diarrhoea. Thus, in the economy of Nature, everything has a purpose.

Flowers for the Poor.—"I hope those who have gardens," writes Lord Monckswell, L.C.C., "and are feeling the pleasure and brightness of the flower season, will spare a few plants or flowers to cheer the tired workers in the dusty city, and bring a hint of summer beauty into the dingy streets and crowded tenements. A post card to the Hon. Secretary, Flower Distribution, Kyrle Society, 49, Manchester Street, W., will bring a prompt reply, giving addresses to which the flowers may be sent."

Sussex Gardeners' Out Inspecting.—A large party of members of the Burgess Hill New Horticultural Improvement Society had an enjoyable outing on the 17th. The party travelled by train from Burgess Hill to Tonbridge, and then drove to Hadlow, having a fine view of Hadlow Castle *en route*. Luncheon was served at the Greyhound Hotel, which over, the party were joined by Mr. Cattell. The party drove through Hadlow Park to Golden Green, where, on Thompson's Farm, the experimental grounds were visited.

Chertsey School of Handicrafts.—The annual outing of the garden boys and staff of the School of Handicrafts, Chertsey, was held on Tuesday, July 16th, when, in company with a large number of friends, they journeyed by steam launch, "May Queen," to Cookham Locks. After spending a short time there the return journey was made. Owing to the low state of the Thames the propellers of the launch became fouled, the party reaching Chertsey between twelve and one o'clock in the cool of the night. Heartly thanks are due to H. J. Veitch, Esq., Hurst & Son, Cooper, Taber & Co., Watkins and Simpson, H. B. May, Allnutt Bros., and others for providing the means for the boys in the garden and the band which accompanied them obtaining this outing. The arrangements were made by Mr. A. J. Brown, head of the garden department.

Mr. Thomas W. Pockett in England.—The above name is well known by gardeners in this country, from the owner's intimate connection with so many fine varieties of Chrysanthemums raised by him in Australia, and sent out conjointly by Mr. Pockett and Mr. W. Wells of Earlswood, Surrey. Mr. Pockett departed from Melbourne on June 7th, and means to stay in the mother country for four or six months. The high esteem in which the curator of the Malvernshire Gardens is held was strikingly exemplified on the evening of May 30th, when a large gathering of representative horticulturists tendered Mr. Pockett a smoke night at the Port Phillip Club Hotel, Melbourne. Mr. R. Ardagh of Hawthorn presided, and the secretary of the Royal Horticultural Society of Victoria, Mr. W. R. Church, on behalf of those present, presented the guest of the evening with a handsome travelling bag. The character of the gathering in itself was a high compliment to Mr. Pockett, as it comprised most of the leading men of the Melbourne gardening circle, while repeated expressions of pleasure were heard on all sides regarding the presence of an unusually large number of the older gardeners. Mr. Pockett, in responding to the toast of his health, thanked the company for the high compliment they had paid to him, and expressed the hope that his visit to Europe would result in some good to local growers. He had been twenty-three years, half of his lifetime, in Victoria, and he felt that he was not yet too old to learn. If the gardens and gardeners of the Old World had anything to teach, and he did not doubt it, he would do all in his power to benefit from their experience.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, July 30th, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 p.m. A lecture on "Some of the Plants Exhibited" will be given by the Rev. Professor G. Henslow, M.A., V.M.H., at three o'clock.

Variorum.—Recent shipments of Tasmanian Apples brought from 5s. to 10s. per case in London; the Victorian and South Australian Apples reached 8s. to 11s. per case. * * The Dunolly Vine and Fruit Growers' Association (Australia) complain of the manner in which fruit cases are thrown about on being put on board ship; it was characterised as simply "shameful." This is thought to be the reason why so much fruit arrives in London in a damaged condition. The matter will be brought before a conference of the central association. * * Many fields of Rye and Barley are already cut, and the grain winnowing, in Essex and Surrey. * * The Great Eastern Railway Company has just issued a new booklet entitled "Holidays in Belgium," by Percy Lindley, describing new, inexpensive holidays, *via* Harwich and Antwerp, in Flanders, and the Ardennes; published at 30, Fleet Street, London.

Mr. George Nicholson.—For weeks past, rumours have been numerous amongst those serving in the Royal Gardens at Kew, that soon they were to lose their respected and world-renowned curator, Mr. George Nicholson. We believe Mr. Nicholson retires on the score of ill-health from his position early in August, to be succeeded by Mr. William Watson, who has for so long been with Mr. Nicholson as assistant curator. The change marks an epoch for Kew, and we echo the expressed hope of our contemporary, "The Gardeners' Chronicle," that "some means will be adopted of testifying the admiration felt in the horticultural world for one whose long career at Kew has been one of sympathy and well doing." Mr. W. J. Bean will occupy Mr. Watson's position, and we believe Mr. William Dallimore, temperate house foreman, succeeds Mr. Bean in the arboretum; Mr. Hackett, deputy foreman in the propagating pits, will hold the post of general foreman in the glass department. A number of changes are being made in the deputy foremanships.

Shirley Gardeners' Mutual Improvement Association.—The usual monthly meeting of the association was held at the Parish Room, Shirley, Mr. J. E. Wilcox presiding over a good number of members, who assembled to hear a lecture by Mr. E. Ladhams of Shirley Nurseries on "The Cultivation of Lilliums," which, he said, was the most beautiful group of all existing plants, outvying the Rose, Orchid, and Iris in perfume, elegance, and the easy way in which they can be cultivated. They came from many lands; there were Lilies from the hot, dry, and rocky slopes of California, others from the margins of rivers, many others from the bogs of Canada; then there were those from India and the Himalayan Mountains, running off in the direction of China and Japan, from whence came the beautiful "auratum" and its varieties; then they found several kinds indigenous to cold Siberia, and, coming closer home, Europe contributed a few, more valuable to us, as they were easier of cultivation than many of the more gorgeous varieties from California or Japan. Mr. Ladhams then pointed out that the chief element of success was to emulate, as nearly as possible, the natural conditions under which the plants were found growing. Not that it was always absolutely necessary to copy natural surroundings, that in itself was impossible; but the true art of cultivation was in supplying from available material conditions equivalent to these. *Lilium giganteum* responded to the right or wrong treatment as emphatically as any plant could do. Having given particulars of treatment, both in pots and open ground, the lecturer pointed out that one of the most essential features for success was that the bulbs should not want for water, and summed up an entertaining and instructive lecture by saying that the successful cultivation of Lilliums chiefly depends on—1, Suitable soil, either in pots or open ground; 2, Careful planting or potting, with plenty of root room; 3, Never to be let get dry, even when at rest should have a little moisture; 4, Shaded from strong sunlight, and keeping free from all insect pests. A good discussion followed, several questions being asked and answered. Prizes for twelve bunches of Sweet Peas, distinct.—First, H. Wright; second, R. Jefferys; third, F. Cleveley. *Epergne* of Sweet Peas.—First, Mr. E. Ladhams. Messrs. Toogood & Sons of Southampton sent, not for competition, a grand collection of Sweet Peas, *vhc.* Mr. B. Ladhams, F.R.H.S., was also awarded *v.h.c.*, for a group of Lilliums and groups of herbaceous plants. A vote of thanks to lecturer and chairman closed a pleasant evening.—J. M.

Crops in the Country.—Wheat promises to be a very moderate yield. Barley will probably be an average crop, and in places there are some good fields of Oats, but all round the straw is very deficient. The corn is ripening fast, perhaps too fast. The hay crops have been the lightest for many years past, and in some cases, indeed, hardly worth the labour of mowing. The pastures are very short of keep. Turnips are very backward.

Public Gardening.—At Leighton Buzzard Connty Court last week Mr. Henry Bodsworth and Mr. William Page and their wives were the defendants in a case in which the Duke of Bedford claimed £10 damages and an injunction to restrain them from taking growing plants, flowers, Ferns, and shrubs from his woods around Woburn. It was stated, says "The Star," that the defendants belonged to what is known as the Munn Gang, the family name of the ringleaders, the women of whom stowed away the products collected and sold them in Bedford Market. Judgment was given for £2, and an injunction was granted. Defendants said the products in the woods always had been gathered and always would be, and declared that they would not pay.

The Profits from Strawberries.—A writer to the "Chester Chronicle" criticises statements regarding the total amounts realised by certain Strawberry growers in the Farnon region. He asks: "Did he" (the correspondent referred to), "make his calculation on 4000 pecks per day at 5s., or what? The last ten days, taken altogether, would not average 2s., much less 5s., when you get returns from Manchester and other places at 9d. per peck and upwards to 2s. and 2s. 6d. There is not much chance of realising £1000 per day. As to Mr. Bellis's Strawberry growing, there are no growers in England that expend so much in labour and preliminary expenses, in preparing the land and afterwards in laying hundreds of tons of clean straw in each of the fields down each bed to protect the fruit. If we had a railway station close to Farnon it would certainly make much difference to the fruit. It leaves the fields here in the pink of condition, but the transhipment from lorries to railway, and railway travelling knocks the fruit about so much, that when it arrives in the markets it is scarcely recognisable as the same article. Then haulage is an expensive item when you have no less than twenty or thirty horses on the road continually, and wear and tear to contend with. I think when you consider these items mentioned you would find the gross profits a day a long way short of £1000 to any large grower, and the smaller fruit growers are now complaining that they don't think Strawberry growing pays any better than Potatoes at the present time."

Horticultural College, Swanley.—The Countess of Aberdeen paid a visit to the Horticultural College, Swanley, Kent, on Tuesday afternoon, the 16th, for the purpose of presenting prizes to the students. There was a large company present, including several former pupils. Mr. Philip Martineau presided, and in his opening remarks congratulated the friends of the College on its continued success. The Countess of Aberdeen, having distributed the prizes, briefly addressed the company, and spoke of the long association of Miss Cons, honorary treasurer and a member of the governing body, with the College. Referring to the work carried on at the College, Lady Aberdeen remarked that even to-day it was in some quarters still regarded as an experiment. That was not the case, however, with the students or with their friends, who by no means looked on it as an experiment. In their work at the College the lady students shirked nothing, but went through a course of thorough practical training. It was gratifying to note the success which had been achieved by those who had gone out from the College, many of whom were now occupying good positions. Lady Aberdeen also congratulated the students who had recently passed through the Royal Horticultural Society's examination. A gold medal had been gained by a student for the fifth time in seven years; thirty-three passed in the first class, and eleven in the second, and there were no failures. Mr. Herbert Morrell, M.P., in proposing a vote of thanks to the Countess of Aberdeen, said he had paid several visits to Swanley, and had been thoroughly satisfied with what he had seen there. During the afternoon a demonstration in bee management was given, and a floral competition was held in the new conservatories. The extensive range of buildings, laboratory, fruit plantations, poultry yards, and dairy were inspected with much interest. The College is open to male and female students, and there are at present about eighty. Some idea of the success obtained may be gathered from the fact that two houses last year yielded 3840 Peaches, and a vinery produced 700 lbs. of Black Hamburg Grapes.

Painting without Oil or Brushes.—A Canadian horticultural newspaper contains an advertisement intimating how one "can paint buildings at one-tenth the former cost." The S— cold water paint requires only the addition of cold water to make a fluid paint. It is put on to buildings by a garden-engine-like invention with painting attachments. The colour is said not to rub off. A woodcut, showing how this ingenious (!) invention works, accompanies the advertisement.

Foods and Their Value.—The Roman soldiers who built such wonderful roads and carried a weight of armour that would crush the average farm hand, lived on coarse brown bread and sour wine. They were temperate in diet and regular and constant in exercise. The Spanish peasant works every day and dances half the night, yet eats only his black bread, Onion, and Water Melon. The Smyrna porter eats only a little fruit and sour Olives, yet he walks off with his load of 100 lbs. The coolie, fed on rice, is more active and can endure more than the negro fed on fat meat.

Exeter Gardeners' Outing.—The annual outing enjoyed by the members of the Devon and Exeter Gardeners' Mutual Improvement Association took place on Wednesday, July 17th, to the gardens of Cardiff Castle, where Mr. A. Pettigrew superintends. Excellent arrangements were made by Mr. Andrew Hope, hon. sec., and Mr. W. Mackay, hon. treasurer. The party journeyed by steamer from Weston to Cardiff. The members of the Cardiff and Connty Horticultural Society invited their southern confrères to visit their show then being held in Sophia Gardens. During the afternoon a demonstration was given by Messrs. Lumley & Co. of drying fruit by evaporation. The excursionists reached Exeter about eleven in the evening, very tired, but thoroughly satisfied; ninety-two journeyed.

Weather around Edinburgh.—The prolonged drought experienced around Edinburgh has caused incalculable loss to both the private and commercial gardeners. Evergreen shrubs and Conifers transplanted during the spring have had a hard time of it, and specimens which, a fortnight ago, were in a good state of health, are now showing signs of succumbing unless copious rains come presently. The growth of deciduous trees is also short, especially in bush fruits, and insects pests are prevalent. The market gardener is, however, the heaviest loser, his crop, as will be readily understood, being more susceptible to failure during a long spell of dry weather. Visiting one of the latter this afternoon (Monday 22nd) I was quite surprised to find the great losses to be contended with. All the early planting of Cauliflowers was, I learned, a complete failure, and plots of the various Brassicas, which, at a distance look well, upon close examination revealed the ravages of finger-and-toe, and the maggot (*Anthomyia brassicæ*). A fine batch of Broad Beans would, I was told, return not a penny, being ruined by blight caused by the attacks of the dolphin fly (*Aphis fabæ*). Commencing at the top, this insect works downwards, until nothing is left but black stalks and pods arrested in their development. Sweet Peas are also scarce and short in the stalk. Strawberries were, as a whole, a fair crop, and perhaps the most remunerative of the season. Until rain comes transplanting of Leeks, &c., is at a standstill, so I came away thinking to myself that the life of the man dependent for a living on the caprice of the weather is on the whole, not an enviable one.—W. L.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901										
July.										
Sunday .. 14	N. E.	deg. 63.8	deg. 57.5	deg. 68.7	deg. 52.5	Ins. —	deg. 65.9	deg. 63.2	deg. 58.8	deg. 47.5
Monday .. 15	N. N. E.	68.4	61.5	78.2	50.8	—	64.5	62.9	58.9	43.3
Tuesday 16	S. E.	71.9	62.5	82.5	49.2	—	65.8	63.0	58.9	41.6
Wed'sday 17	S. W.	72.8	62.5	83.6	49.8	—	67.9	63.5	59.0	42.9
Thursday 18	E. S. E.	79.0	63.1	85.0	59.5	—	69.7	64.1	59.0	54.3
Friday .. 19	E. S. E.	71.9	65.3	88.3	55.0	—	70.1	64.7	59.2	46.6
Saturday 20	E. S. E.	78.5	65.5	84.2	58.9	—	70.1	65.1	59.4	51.5
MEANS ..		72.3	62.6	81.5	53.7	Total —	67.7	63.8	59.0	46.8

A very hot, dry week. The reading of the maximum thermometer was more than 80° on five days, and the mean for the week 81.5°.

Lilium Conference at Chiswick.

THIS conference began at 2.30 and ended at half-past four on Tuesday, July 16th, at Chiswick, H. J. Elwes, Esq., occupying the chair. There was a large attendance of variously distinguished men, and a few ladies. Mr. J. G. Baker, F.R.S., late keeper of the Herbarium at Kew, was first to open proceedings, his subject being a consideration of the new Lilies introduced from abroad since the publication of Mr. Elwes' Monograph of the genus twenty years ago. The space at our disposal necessitates brevity on our part.

New Lilies.

Mr. Baker was received with applause, and at once started his story in his own homely way. He referred to General Collett, who collected in Upper Burma, and to Mr. Boxall, who specially searched for Liliaceae. At that time, twenty years ago, there were thought to be four distinct species, though now there are really only three recognised in that region. Central and Upper China is very rich in Lilies, and at the conference those present were gratified at having Dr. Henry amongst them. This gentleman has collected more plants, and certainly more Lilies, in this region than any other person. In all he has collected something like 13,700 bulbs, among these being many that are new to us. He, and many of the French, German, and Italian missionaries, have done exceedingly good work. Mr. Baker describes the new species under the classification adopted by himself many years ago, and which will be found in Nicholson's "Dictionary of Gardening."

Sub-genus Cardiocrinum.—This first section includes *Lilium cordifolium* (Japan) and *L. giganteum* (Himalayas), both introduced to culture within the last twenty years. *L. mirabile*, with the general habit of the two foregoing, has an inflorescence of from seven to fifteen flowers; it grows to the height of 5 or 6 feet, and has broad cordate leaves. While all other Lilies have centripetal inflorescences, this one is centrifugal, that is, the flowers open from top to bottom, and from this abnormality its name was derived. *Lilium Glenei* comes very near *L. cordifolium*, but differs in having more numerous and smaller flowers. It was collected in 1861, by the man whose name it bears, in the Island of Sachalin.

Sub-genus Ulirion.—This is the Browni and longiflorum section. Its new additions include *L. sulphureum*, which was sent out by Messrs. Hugh Low & Co. under the name of *L. Wallichianum superbum*. It is nearly allied to the Himalayan *L. Wallichianum*, but its flowers are different, while it also produces bulbils in the axils of the leaves. This is now accepted as a good species. It was collected in 1891 by Mr. Boxall, and has been figured in the "Botanical Magazine."

L. primulinum was thought to be identical with *L. neilgherrense*, but differs in a few minor details. It is not so abundant as *L. sulphureum*. General H. Collett collected it in 1888. Then there is *L. Bakeriana* (figured in the Journal of the Linnean Society) also collected by Gen. Collett. The species named *L. Lowi*, and which we figured on page 55, is the true *Bakerianum* according to the lecturer. *L. Lowi* was originally collected in Upper Burma by Dr. Henry, Mr. Hancock, and Gen. Collett, but has been found in widely scattered localities since then, and *Bakerianum*, if this was first found, will be the name that must stand. *L. rubellum* was received at Kew from Japan in the year 1898. Messrs. Bunting of Chelmsford first had the stock, which then passed to the hands of Messrs. Wallace & Co., who have done much to spread it abroad. Mr. Baker commends it as "decidedly one of the best;" and assuredly it is exceedingly beautiful.

L. japonicum Alexandræ, introduced from Japan by Messrs. Wallace, and Veitch & Sons, Ltd., comes very near to the true *japonicum*, formerly called *Ukeyuri*. It grows tall, and has the habit of *L. longiflorum*, with flowers 5 inches to 6 inches long. It is a very fine Lily. *L. leucanthum* was found by Dr. Henry in the Tchang Gorge, where he found so many of the other new species. It resembles *L. Browni*, but differs by having purer white flowers and leaves that bear bulbils in their axils. *L. longiflorum formosum* is not so valuable; *L. Browni*, according to Baker, has five varieties. *L. formosum* (which is inconveniently near to *L. l. formosum*) was collected in Yunnan by a certain reverend Father. It comes nearest to *L. Browni*, but differs in the longer stamens with yellow pollen and white external perianth.

Sub-genus Isolirion.—To this group *L. elegans Batemanni* alone has been added. It has large, clear apricot-yellow flowers. It was got from Japan, but is, perhaps, a mere hybrid.

Sub-genus Archelirion.—The handsomest of all new Lilies—namely, *L. Henryi*, honours this fine section. It grows 10 feet high at times, flowering late, bearing very distinct bright red flowers. It was discovered by Dr. Henry in 1888 in the Tchang Gorge. There are several new varieties of *L. auratum* and *L. speciosum*. Mr. Maries introduced from Japan *L. a. tricolor* and *L. a. platyphyllum*; the former has larger flowers than the type, eleven to thirteen prominent veins and brown dots on the segments. Some of the new species are nearly allied to *L. oxypetalum*, especially one named *L. Delavayi*, found by the Abbé Delavay. The flowers are solitary and funnel-shaped. *L. yunnanense* has been found by Dr. Henry, Mr. Hancock, and Abbé Delavay. The perianth is 1½ inch wide, the colour reddish.

Sub-genus Martagon.—There are a good many new species of the Martagon group; they include *L. Jankæ*, *L. Heldreichi*, which is

nearly allied to *L. carniolicum* and *L. chalconicum*, having bright reddish flowers 2 inches long, with reflexed segments.

Seven other Old World Martagon species and varieties received hurried references, but as they were entirely new to us, and but imperfectly heard, we will not commit ourselves by attempting to enumerate and describe them. Before concluding, Mr. Baker named four or five of the American Martagons, and these—the American species—he said were exceedingly difficult to classify. Thus, in all, we have now about thirty-five distinct species not included in Mr. Elwes' Monograph, showing, as Mr. Baker said, that the collectors had not been idle.

Mr. Elwes pointed out how botany and horticulture are co-related in many respects, and urged that the union should be made stronger. He remarked, in regard to the new species, that though so many were known, only from seven to ten have so far been introduced to cultivation. Tibet and nearly all of Western and Central China has yet to be searched, and opens up a fine field to the collector. Collecting, however, is an onerous and very dangerous pursuit, and the perils and operations were described at length by the chairman. He then introduced Dr. Henry, a comparatively young man, whose purpose was to describe the native habitats of some of the Lilies.

Lilies and their Habitat.

Dr. Henry at the outset said that 100 extra collectors were wanted for the centre of China and Tibet. One hundred would by no means exhaust the country, for it presents an immense flora. The province of Yunnan, in which he had travelled, has an average elevation of 5000 feet, and many of the mountains reach 10,000 feet up to 20,000 feet. It is a day's march to the summit of some of the mountains and down again. He described the country as having thousands and thousands of valleys, and thousands and thousands of mountain ranges. The eastern end of the Yangtse gorges was where Dr. Henry collected. The Yangtse only drops 70 feet in the last 1000 miles of its course, and so much have Europeans heard of the broad alluvial expanses along the banks of the rivers, that we forget there are mountains in China at all; yet it is the most mountainous country in the world. *Lilium calosinum* was the first discovered. (It is numbered 511 in Kew Herbarium). In the habitat of this Lily the thermometer falls to 30° and 32° F. in winter, and rises to 100° in the shade in summer.

Many beautiful glens branch from the Yangtse, and in some of these *L. Browni* is found. *L. leucanthum* was sent from these regions by Dr. Henry, under the impression that it was *L. Browni*. In a wild state the flowers of the last named are distinctly greenish. *L. rubellum* grows at 4000 feet to 5000 feet above sea level. The peasants in these parts cultivate *L. tigrinum*, but after much searching the Dr. never found this species wild. *L. Henryi* has a most restricted sphere, and has not been met with out of one locality. It grows at the top of precipitous grassy slopes, 2000 feet above the gorges; it is never at the bottom of the glens, but at the top. Sometimes it is found on conglomerate, at other times on limestone; showing that, at any rate, it is not particular as to the soil it grows in. It is found in exposed situations, *L. Browni* preferring shade and shelter. Wild, it is never higher than 4 feet, and has generally one to five flowers. It is subjected to a considerable amount of cold in winter, the ground being at times covered with snow. *L. giganteum* is a species that is never seen in open, grassy glades; it favours the depths of high-placed mountain forests. There is a green variety. *L. leucanthum* is common in glades more or less sheltered; it differs somewhat from the ordinary *Browni*. *L. Lowi* (*L. Bakeriana*, Baker) is found on bare, exposed, grassy mountains, 5000 to 7000 feet high; it is numbered 10,774 in Kew Herbarium. *L. Lowi* has been described as a white Lily with brown markings; but according to Dr. Henry this is not *Lowi*, but probably refers to *L. yunnanense*. The species *L. Bakeriana*, held by some to be distinct from *Lowi*, grows under exactly the same conditions, which probably goes to prove that they are probably synonymous. *L. nepalense* varies much both in form and colour; it thrives at 5000 feet up to 9000 feet. The foregoing comprise the species encountered by Dr. Henry.

Cultural Discourse.

Mr. George Yeld, M.A., York, furnished a few brief excerpts from a paper he had prepared. He noted that all of the essayists greatly summarised their expositions; but the full text of each paper read at the conference, and some others besides, will be published *in extenso* in a coming Journal of the Royal Horticultural Society. Mr. Yeld complained that northern cultivators have not the favourable conditions for growing Liliaceae that southerners have. Speak to some north-country men, and they will retort, "Lilies, did you say? Ah! yes; but they are 'miffy,' I cannot do anything with them." Mr. Yeld's York town garden is well sheltered, and he has new and suitable soil for his bulbs, besides which he always affords them the kindest and most careful attention. *L. Martagon* grows rampant with him, while *L. M. dalmaticum* hardly maintains its place. The white Martagon also does well; *L. Hansonii* starts very early, and is apt to be nipped by frosts; while if *L. testaceum* is well looked after it succeeds passably. There are some splendid plants to be seen a few yards from York Minster, and there are other fine clumps near St. Peter's School.



LILIUM WALLICHIANUM SUPERBUM.

(See Note on page 76.)

L. Humboldti as a rule succeeds from imported bulbs; *L. H. magnificum*, in a heavily sheltered place, is doing well for the third summer; *L. superbum* succeeds; *L. canadense* does not; while the cost of *polyphyllum* and *sulphureum* was great, but their progress small. *L. colchicum* is one of the finest of Lilies, and succeeds in rich soil, partially shaded. Mr. Yelo's best bulbs were raised from seeds, some of these now furnishing thirteen and fourteen flowers. The disadvantage is, however, that one has to wait ten or eleven years before the seedlings reach a flowering stage. *L. giganteum* is liable to rot in spring. The lecturer told an amusing story of how he had saved a handsome specimen of this *Lilium* from destruction during a violent thunder-storm by holding an umbrella over it! Many Lilies do well when they have to contend with the roots of trees, grasses, or herbaceous plants. These seem to absorb the excess of moisture. In concluding his observations, the essayist enjoined cultivators to get fresh soil from time to time; never remove Lilies so long as they are doing well, and be careful to guard against diseases and insect pests.

Lilies in Pots.

This was the subject of a paper provided by Mr. R. Wallace of Colchester. Some Lilies, explained the essayist, can stand considerable heat, others rebel against it. Well-selected bulbs potted in early autumn, and their pots plunged in ashes in cold frames, to be taken into heat as desired, will provide Lilies by the end of May. Of good forcing kinds, Mr. Wallace recommended, amongst others, *L. umbellatum* and its varieties *erectum*, *Cloth of Gold*, and *incomparabilis*. *Lilium elegans* (syn. *Thunbergianum*) has many good varieties, particularly worthy being *Golden Queen*. These easily forced dwarf Lilies associate well with Japanese Maples, *Furcias*, and other foliage plants. *L. excelsum* can be had in flower by the middle of May. They suffer in foliage if subjected at any time to too hard frost. *L. Hansoni* has been proved to be first-class, and is effective on account of its tall habit. Growers of *L. rubellum* must not be discouraged with its appearance when first it appears above ground; it is then very weakly looking. Mr. Wallace spoke in tones of great praise of *L. Henryi* for pot-forcing purposes. If started early it can be had in flower by May. Remove it from heat when the flower buds show colour. The colour is much better developed under glass. *L. giganteum* when well "done" is very striking. Too much heat and excess of moisture cause the stems to split. *L. Browni* should be treated in a similar manner to *L. japonicum*. The flowers take on a splendid external colouring if they are exposed to the full sun. *L. Browni* should not be hard forced, else in great heat they lose all colour. It can be had early in June. *L. longifolium*, *L. candidum*, and *L. l. eximium* (syn. *L. Harrisii*) are all popular favourites of course. *L. Martagon alba* and *L. Szovitsianum* for pots are also good.

For cool culture the following have been proved:—*L. auratum*, which must be allowed to open its flowers slowly, but steadily. *L. speciosum*, with its varieties *album* and *rubrum*, together with *L. pardalinum*, *Grayi*, *enpeibum*, are also to be added to the list. *L. Krameri*, *tigrinum*, and *splendens* can all be had in flower earlier by cool house treatment.

Mr. Wallace urged that more specimen Lilies might be grown. Ten or a dozen large bulbs will grow, and continue to increase, if placed in a large pot or tub, and the massive effect when in bloom can be well imagined. Shade from strong sun is generally necessary, and two syringings per day is advisable. When potting, it is better to use an over-size than an under-size; there is then space for top-dressing, and from no cause should the top or stem roots be left exposed or dried. Fumigate regularly to extirpate insect pests, and water carefully at all times. Cow manure water, with soot and lime water, are respectively very beneficial. A good compost for pot Lilies consists of two-thirds fibrous loam, and one-third of leaf soil and sand.

When Mr. Wallace had concluded, and the chairman's hints had passed, Mr. Jenkins of Hampton Hill, a well-known hardy plantsman, furnished a few pertinent references on *Lilium* culture. He advised that *L. longiflorum* should be planted 12 inches deep; and he referred to the vigorous plants of *L. chalcedonicum* to be seen growing on magnesium limestone in Gloucestershire, while in the same county, on heavy soil, it does not at all succeed. *L. pardalinum* and *L. canadense* favour peaty soils; for these, with *speciosum* and *giganteum*, he advocated the freer use of rotten dung.

White Lily Disease.

This was the subject upon which Captain Savile Reid made some exceedingly interesting observations. He has a fine garden in Kent, and in a well-selected bed he grew the White Lily, also called St. Joseph's or the Painter's Lily (*L. candidum*), most successfully for three or four summers; then came a foul disease. Lime and soot waterings were ineffectually tried; but, acting on advice obtained from one of the gardening journals, he lifted 250 of his bulbs and laid them out to dry for a few hours, then placed them in a linen bag with flowers of sulphur. The whole process took forty-eight hours, after which they were planted. But there were an unfortunate (?) twelve that somehow or other were left, and remained hanging in a dry shed for fully a month. There was a corner to place them in, however, and so, instead of being thrown away, they were planted, and lo! they came up the freest and the strongest.

Capt. Reid then mentioned his success with *L. Parryi*, which he and some other gentlemen bought in a batch from Mr. Carl Purdy, the Lily

expert of California. Each had six bulbs, and Capt. Reid's half dozen were planted in a depression, thought to be a semi-bog. The pipe which fed the place with water became choked, and the "bog" was left entirely dry. The good captain feared he must surely lose his precious bulbs; but, though they had been bought on the recommendation that they were samples of a bog-loving species, his plants thrived splendidly, while the bulbs of his neighbours maintained only a feeble struggle. Mr. Elwes said that Lilies frequently succeeded under totally different conditions when cultivated as compared with their wild state. He had the distinction of being amongst the first to visit *L. Parryi* in Southern California after its discovery. He referred to the fact that many Lilies will not succeed unless when they have to struggle for their nourishment with the roots of herbaceous plants, grasses, or shrubs. Again, after some Lilies having produced good seeds, die off; others refuse to flower at any cost. In 1874 he had *L. concolor* sent to him, and from that time to the present (nearly thirty years) he had tried to flower it, and treated it in every thinkable manner, without success. It was observed that the proper season for the germination of *Lilium* seeds appears to be at the period when *Lilium* leaves are in their autumnal condition.

Mr. Massee on Lily Fungus.

Mr. George Massee, the distinguished fungologist from Kew, delivered a few extempore remarks. Forty to fifty funguses are known to attack the genus *Lilium*, though the most dangerous and persistent one is *Botrytis cinerea*, of Prof. Marshall Ward. The spores are in the soil, and they may grow for years, living on what organic matter they can obtain. Once a Lily bulb is placed in the soil, however, the spores settle upon it without delay. Sclerotia are formed, from which in a year's time a "mould" or fungus-web grows, and by processes of vegetative or sexual union the mycelium gives rise to other active spores, which burst and spread the fungoid web in all directions. So when once a Lily is attacked it is impossible to kill the disease without also killing the host plant. There is a preventive—a very simple one, and very reliable too, which is, to plant your bulbs amongst silver sand, at the same time mixing a small proportion of flowers of sulphur, and you practically seal them against attack. It is the tip of the mycelium that grows, but it cannot penetrate the sand, because there no humic matter is, and so no nourishment. Mr. Massee satirically observed that such preventives are too simple for the working gardener's notice, they are not worth his troubling about, therefore in his wisdom he never applies them. *Kainit* or *Strassburg fertiliser* will kill the mycelium of any fungus known. These words are Mr. Massee's, and we have given them italics to emphasise their significance. He recommended growers to remove the surface soil from around the Lilies and place in new soil, "mixed with a very little of this kainit," and you may be assured of having killed the fungus. Preventive methods only, are valuable.

On Mr. Massee concluding, Rev. W. Wilks, M.A., proposed a vote of thanks to Mr. H. J. Elwes, seconded by Dr. Masters, which was duly and unanimously accorded. The various papers and contributions will be published *in extenso* in the Society's Journal.

Show Carnations and Picotees.

Now in full beauty of blossoming is the complete and important collection of Mr. F. A. Wellesley, at Honeypots, Woking. This gentleman started the culture of these choice and dainty flowers a few years back in a modest way with a few kinds, more or less pretty in their way, and has by a gradual process become so imbued with the charm of Carnations that neither time, labour, or money are spared in producing each variety in its perfect phase. Great care, for instance, has been taken in regard to selection of choice stocks in the case of the bizarre and other Carnations and the white-ground Picotees, until each famous variety is not only grown in number, but the blooms are especially true in character. Mr. Wellesley, with the true instinct of a florist, loves these "class" flowers most, although ample room in his regard is left for the yellow-ground Picotees, the Fancy Carnations, and the self-coloured ones. All are well done, and it will not be too much to say that by the time these notes are in print visitors to the leading Carnation exhibitions will think so, along with the writer. About 3000 plants are grown. The varieties are not selected so much to obtain a large number of them, as they are to include only the best; therefore a considerable number of plants of each sort are cultivated. The plants are placed in first-rate order in their respective divisions, so that it becomes an easy matter to judge the comparative merits of the flowers.

In scarlet bizarre Carnations the best are Robert Houlgrave, Admiral Curzon, and Robert Lord; the last very fine indeed. The best scarlet flakes (one colour on a white ground) are Sportsman and Guardsman. John Wormald, a very choice variety, is not less fine, but generally too early in bloom to please an exhibitor. The crimson bizarres are especially strong. We doubt if a finer will be seen this

year than a bloom of J. S. Helderly, which will, however, be past before the show at the Palace. Master Fred and Lord Salisbury are other very rich things, the latter grand in colour, but with too many petals to please the fastidious. Nothing can beat Wm. Skirving and Sarah Payne in pink and purple bizzarres, the last-named being regarded the finest Carnation in existence when at its best. It is a flower on which the eye can never tire, so delicate and pure are its markings. In purple flakes there are but two really fine sorts—namely, Gordon Lewis and George Melville. The first is to us most beautiful. These lovely flowers have become famous since the death of the raiser, the late Mr. Dodwell, who also gave us the finest rose flake Carnation in Merton; this, Thalia, and Mrs. Rowan, are the leading kinds.

Among Picotees one hardly knows which to admire most. The wire-edge on a white ground are chaste indeed, like Thomas William, and yet there is something remarkably handsome in the heavy edge blooms, like John Smith or Amy Robsart. The three crimson varieties with heavy edge of colour are John Smith, Ganymede and Brunette; but not far behind them is Isabel Lakin. In light-edged red there are Thomas William, Mrs. Gorton, Acme. This last is splendid on the plant, but curiously fails as a show flower when staged. Heavy scarlet-edged flowers are represented by Mrs. Sharp, Clio, Mrs. Barron; and lightly edged of the same shade by Favourite, Fortrose. Grace Darling is a new variety of this class that is exceedingly pretty.

The purple-edged kinds are prominent; Amy Robsart and Fanny Tett are fine, the first named being to our mind better than Muriel, which has for years been the premier of its division. A trio of purples of a light marking are Somerhill, Harry Kenyon, and Pride of Leyton; a very useful flower being Esther. In heavy rose edges Little Phil is charming; Lady Louisa and Mrs. Beswick are two sorts nearly distinct and fine; Mrs. Foster is a new kind of excellent properties, but too early, at least for growers in the south. Our notes take us to that lovely section of modern production, the Picotees with yellow ground. Mr. Wellesley's collection is truly rich in these. My own choice falls to Lady St. Oswald, as being the most beautiful on account of its rich deep shade of yellow. In Lauzan, a variety with a distinct purple edge, there is one scarcely less fine; Helodorus, too, is handsome. These are the newer kinds. Among better-known sorts are Onda, grand in size; Heather Bell, Lady Bristol, Duke of Alva, Hygeia, bright rose edge; Dervish, light rose edge and pretty. Mrs. Douglas and Mrs. Robert Sydenham, two older kinds, not surpassed in refinement if beaten in size.

Mr. Nigel, a variety with heavy dark crimson edge, will probably soon be classed as a Fancy. Although very rich it looks not delicate enough to be placed with yellow grounds proper. The same remark applies to H. Falkland and Mrs. Tremayne, two showy sorts. Fancies include some grand blossoms. This class is possibly the most liked by the ordinary visitor at a show; they are richly marked, large, and vary in colour to a remarkable degree. Voltaire and Eldorado, now comparatively old, are still among the best in the lighter shades. To name the best Fancy would be difficult. Mr. Wellesley is particularly strong with Monarch, a variety that does not succeed well with everyone. It is not easy to admire even the grand Hidalgo more than this; both, however, are grand in size and colouring. Each has deep yellow and maroon its predominant shades. Czarina and Chas. Martel, scarlet and yellow, are exceedingly rich, and when seen as we noted

them, are among the most choice. Queen Bess, rosy lilac on apricot ground, is charming; so is Perseus, yellow, red and lilac. Cardinal Wolsey is a distinct kind now well known; Guinevere, rose on buff ground, is especially rich and distinct. Primrose League, Sam, and Janira are all good, but not the strongest of growers; Lady Ardilaun, but for a rough edge, would be highly esteemed. Excellent is a seedling raised by Mr. Wellesley named Miss Laura Webb. It is not yet fully open, but the deep rose on buff ground is being produced in the manner that gained it so many admirers last year.

The last division is the self-coloured. Among pure white Carnations Mrs. Eric Hambro takes first place in the Honeypots collection. This is fine. Trojan, Wild Swan, and others come in the rear as being less pure and well formed. As yet the finest crimson is Uncle Tom, but the newer ones, such as Barras, Tabley, Agnes Sorrel, Mancunian, Sir Bevy's are fine. All the dark-coloured ones seem an easy prey to thrip; in fact every pest to prevent them opening clean of petal. In apricot shades Benbow is perfectly formed; Midas less fine in quality, but large; Mrs. Colby Sharpin rich in colour, but the plant weakly. A really good blush-coloured sort has yet to be raised. The best are Seagull and Her Grace. Exile has pretty rose-coloured flowers, and the bloom is well formed. A bright-rose kind is Mrs. Gascoin, raised by Mr. T. Lord; this is fine, and should assist in adding brightness to the stands of flowers which will shortly leave the collection under notice. The leading kinds in salmon pink or light scarlet shades are Mrs. Jas. Douglas, Endymion, Enchantress, all of which are represented by fine blooms. In rich scarlets nothing to our mind approaches Lady Hindlip; the difficulty with this is to prevent it from scalding in hot weather. Germania, Regina, and Britannia, furnish the finest yellows; and a pretty flower is Lady Jane Grey, a heliotrope shade, deep and clear.

The above named does not include all, only the more striking among the flowers in Mr. Wellesley's display. What these flowers will do at the forthcoming exhibitions the Journal will record, as the plants are grown with the object of competition. In Mr. Gilbert the owner has a gardener not less enthusiastic than himself, and one exceedingly painstaking. With such a well ordered collection it is to be hoped that careful hybridising will have some thought, and by so doing try to improve these charming flowers in directions that may suggest themselves. Florists should never rest. It must be remembered that

half a century and more has passed in bringing the Carnation to its present state of perfection.—H. S.

[From our report of the National Carnation Show held at the Crystal Palace on Friday last, it will be seen that Mr. Wellesley won all the first prizes in the classes for a dozen blooms in the different sections, viz., Bizzarres, Picotees, yellow-ground Picotees, Fancies, and Selfs.—ED.]



CARNATION DUCHESS OF ROXBURGHE.

Carnation Duchess of Roxburghe.—On page 12 of the *Journal of Horticulture* for July 4th, 1901, we referred to blooms of this Carnation, which had reached us from Messrs. Laing & Mather, Kelso-on-Tweed. It received an award of merit from the Floral Committee of the Royal Horticultural Society on June 18th, when it was shown by Mr. James Douglas, Great Bookham. "The ground colour of the flower is a beautiful rich primrose, striped with a lovely shade of terra cotta and heliotrope."

Societies.

National Carnation and Picotee, July 19th.

In broiling hot weather the southern section of this society held its annual exhibition on Friday, the 19th inst., at the Crystal Palace. About £300 and four silver cups were offered in prizes, the competition being very keen in nearly every section. Mr. Martin R. Smith, president of the society, "swept the boards," as usual, and won his own silver cup in the first division. Mr. F. A. Wellesley of Woking took nearly every first award in the second division, winning the cup offered in that section, and Mr. R. C. Cartwright of Birmingham again carried off the third division cup; the extra cup fell to Mr. D. Walker, Kilmarnock, N.B. The show, on the whole, was very high class, all the tables being staged on the open area to the left of the central aisle opposite the great Handel organ. A luncheon was provided at 1.30 P.M., at which a very large gathering of Carnation enthusiasts, including many ladies, were present; the company was afterwards photographed. Short speeches were delivered by the president, by Rev. F. D. Horner, Mr. Robert Sydenham, and Mr. C. Henwood, the secretary. To the latter a warm word of thanks is due for his tireless exertions, which are at times very onerous, yet which he has the satisfaction to know are proving increasingly successful; also to Mr. Castleton, the garden superintendent at the Crystal Palace, whose good offices in helping to arrange the exhibition were so perfectly and satisfactorily performed.

FIRST DIVISION: Class 1.—For twenty-four blooms, dressed on cards, bizarres and flakes only, not less than twelve distinct varieties, seven prizes were competed for, the first being £3, and the last 10s. The renowned Mr. M. Rowan from Clapham was a very good first, having good blooms of Admiral Curzon, W. Skirving, Merton, James Douglas, J. S. Hedderley, Gordon Lewis, Mars, Sportsman, J. S. Hedderley, Fred, George Melville, Valkyrie, John Buxton, Sarah Payne, Robert Lord, Thalia, and Robt. Houlgrave. The second prize fell to Mr. Chas. Turner, Slough, with good samples of Agricola, Jas. Crossland, Fred Phillips, and Chas. Henwood; third, Mr. M. R. Smith of Hayes.

For twenty-four Fancy varieties, dressed, in a dozen varieties, Mr. Martin R. Smith (whose gardener is Mr. C. Blick) led easily. His collection included Cecilia, Etna, Ensign, Agnes Sorrel, Sultan, Daffodil, Mrs. Eric Hambro, Chev. D'Eon, Falcon, Enchantress, Sir Beveys, Orphans, Much the Miller, Fouché, Fredegonde, and Barras; all were magnificent. Mr. C. Turner was second with Triton, Lady Hermione, Dick Turpin, Lightning, Benbow, Comet, Venus, Lady White, Rizzio, Zampa, and others. Mr. G. Chaundy of Oxford came a very fair third.

The two dozen blooms of dressed self Carnations, in twelve varieties, were well shown by Mr. C. Turner, who gained first honours. His blooms were Alexandra, sport; Goldylocks, Voltaire, Elaine, Eldorado, Aglaia, Galileo, Heroine, Persimmon, Paldmon, Algol, Chas. Martel, and Vespasian. Mr. M. R. Smith of Hayes came second, Mr. J. Walker third, and fourth Mr. G. Chaundy. All the stands were good, and particularly fine were some samples of Pagan, Geo. Cruickshank, Yellow Hammer, and others in various of the stands. Mr. F. Hooper, Bath, was "passed" (not disqualified, but not judged) for including two white ground Picotees in his stand.

For twenty-four white ground Picotees, twelve varieties, Mr. M. R. Smith again showed the way. He staged a very even set of nicely sized blooms, clean and distinctive. They included Mrs. Beswick, Beau Nash, Mrs. Barron, Lavinia, Miriam, Grace Darling, E. D'Ombain, Favourite, Somerhill, Amy Robsart, Nares, and Etna. Mr. C. Turner was a very fair second, though some of his blooms were much too open in the centre. Mr. G. Chaundy of Oxford followed third, and Mr. J. Walker of Ham fourth. For a similar entry of yellow grounds Mr. M. R. Smith was again foremost with Badminton, Gronow, Lady St. Oswald, Onda, Lawzan, Sylvia, Franklyn, Badoura, Raglan, Mrs. Durant, Fairy Queen, Grisi, Neef, Gertrude, and Ababa. The first three blooms were immense and very handsome. Mr. Turner was again on the heels of Mr. Smith, and Mr. F. Hooper, Bath, third. The others following were not nearly up to standard.

In the entry for six self Carnations of one variety the first award fell to Mr. M. R. Smith with Cecilia, and second to Mr. C. A. Tate with Bendigo. Mr. Chaundy was third with a poor white seedling. Messrs. Smith, Turner, F. Hooper, C. A. Tate, and J. Walker were so placed for six yellow or buff-ground Fancies, the varieties respectively being Chas. Martel, Voltaire, The Queen, and distinctive Geo. Cruickshank. There were no entries in class 8; while in class 9 Mr. Smith beat Mr. Tate, and third Mr. G. Chaundy, for six blooms of any yellow ground Picotee. Childe Harold from Smith, and Countess of Jersey from Tate were superb. In class 10, for twelve distinct blooms of Selfs and Fancies, three blooms of each, the redoubtable Mr. Smith was leader with handsomely set-up trusses in patent blue-painted tubes. His varieties were Paladin, Cecilia, Sunshine, Duke of Alva, Alcinous, Lady Cynthia, Henry Falkland, Firebrand, Alexis, Lawzan, Nolan, and Much the Miller. Mr. J. Walker was a moderate second with blooms inferiorly arranged.

SECOND DIVISION: Class 15.—For twelve bizarres and flakes, distinct, Mr. F. A. Wellesley, Woking, beat Messrs. Thomson & Co., Birmingham, and third Mr. A. J. Rowberry of Stamford Hill. The first collection included G. Melville, R. Lord, J. S. Hedderley, Gordon Lewis, Mrs. Shaw, W. Skirving, J. W. Bentley, R. Houlgrave, Merton, George,

Master Fred, and Sportsman. Messrs. Thomson's best blooms were of the varieties Thalia and Geo. Melville. The same two winners led for twelve dissimilar selfs, and third Mrs. Whitbourne of Ilford. Sultan and a sport from Gordon Lewis were each well shown in the first prize lot. Again, in class 17, for twelve dissimilar Fancies, Messrs. Wellesley and Thomson & Co. were first and second respectively. The first lot was grand, and so was the second. Here are the names in the former entry:—Voltaire, Monarch, Czarina (seedling), Zingara, Guinevere, Hidalgo, Primrose League, Mr. F. Wellesley, Queen Bess, H. Mackenzie, and Miss Lanra Webb.

As one read the first prize cards in class after class, and found Mr. Wellesley leading, it dawned that here was one who this year has "swept the boards." His blooms were all of them clean, good, well-dressed, and attractively staged. For twelve distinct white-ground Picotees he beat Messrs. Thomson & Co., who were placed before Mr. A. J. Rowberry, all with neatly edged and fine blooms. Fanny Tett, Little Phil, Lavinia, Ganymede, Mrs. Barron, T. Williams, Fortrose, Mrs. Sharpe, Brunette, Nellie, Mrs. Burnett, and Amy Robsart were in the first stand. Messrs. Wellesley, Thomson & Co., and A. J. Rowberry were first, second, and third respectively for twelve blooms of yellow-ground varieties, the first having Badminton, Daniel Defoe, His Excellency, Lady St. Oswald, Mohican, Mrs. Douglas, Lawzan, and Hesperia, and bright, heavy blooms of much excellence.

For six self Carnations on cards Mr. Wellesley was first with Mrs. Eric Hambro, white; Messrs. Thomson & Co. second with the same var.; and third, Mr. A. J. Rowberry with Comet. Messrs. Thomson and Co. managed to beat Mr. Wellesley in class 21 for six yellow or buff-ground Fancies, the former showing Voltaire in magnificent form and colour; and the latter with Monarch, also good, and very close. The other prizewinners in the foregoing classes were Messrs. P. S. Smith, Upper Norwood; C. A. Tate, W. Dulwick, Mrs. Whitbourne, and Mrs. Brookes Smith. For six blooms of any Fancy sort Mr. F. A. Wellesley, of Woking, won with Artemis, very handsome and strong blooms; second, Mrs. Brookes Smith, St. Mary Church; and third, Mrs. Whitbourne with poor blooms of Distinction.

The winners for six distinct bizarres and flakes were Messrs. Thomson & Co., F. A. Wellesley, and Phillips & Taylor, from Bracknell. The first prize entry included The Imp, Stanley Wrightson, Helmsman, Monarch, Golden Eagle, and Mr. J. Douglas. It was evident pains had been taken to stage well, a point that means so much in a keen competition.

THIRD DIVISION: Class 25.—Here, for six bizarres and flakes there were a dozen prizes awarded, which is surely very encouraging to those who are lucky to have a "National" prize. Mr. R. C. Cartwright, from King's Norton, led the way with Gordon Lewis, a sport from John Wormald, Italia, J. S. Hedderley, John Wormald, and Wm. Skirving, neat and good blooms all of them. Mr. J. J. Keen of Sonthampton came as a close second, and third Mr. D. Walker, Kilmarnock, N.B. Again there were a dozen prizes awarded in class 26, and Mr. Charrington was placed in the forefront; Mr. A. R. Brown, Birmingham, and Mr. R. C. Cartwright, third. The best six Fancies were staged by Mr. W. Spencer, jun., including Voltaire, Muleteer, Galileo, Eldorado, Zingara, and Brodick. Mr. Cartwright was second. The first award in class 28, for six white-ground Picotees, distinct, went to Mr. S. Went, Thames Ditton, with Brunette, Mrs. Beswick, Fanny Tett, Pride of Leyton, Little Phil, and Lavinia, all very fine. Mr. J. J. Sheldon won for six yellow-ground Picotees with Lady St. Oswald, Mortimer, Hon. Mrs. Douglas, Duke of Alva, Daniel Defoe, and Empress Eugénie; Mr. S. Went was a good second with Alcinous, Mrs. Tremayne, seedling, Empress Eugénie, and Lawzan; the third went to Mr. Charrington. The latter gentleman led for three self Carnations, having Eric Hambro. There were a whole host of entries for three yellow or buff-ground Fancies, the premier award being captured by Mr. J. Fairlea of Acton with Voltaire. The latter were immense blooms, and perhaps the best of their kind in the show. The second award was adjudicated to Messrs. Taplin & Sons, Newton Abbot, and third to Mr. E. Charrington. For three Fancy Carnations, other than yellow or buff ground vars., Mr. W. Spencer, jun., led with exceedingly fine blooms of Artemis. For three yellow ground Picotees, Mr. S. Went was placed in the van with a trio of the loveliest blooms we saw, the variety being Lady St. Oswald. For three distinct varieties of selfs and Fancies, three blooms of each, Mr. R. C. Cartwright again came right to the front with good trusses of The Gift and Lady Hermione, though his vase of Mrs. J. Douglas were inferior.

There was a section devoted to exhibits without dressing or cards, the classes 36 to 39 being devoted to them. Here we found Mr. D. Walker, Kilmarnock, N.B., first for six dissimilar bizarre and flake Carnations. His half dozen included Gordon Lewis, J. S. Hedderley, Christigalli, Geo. Ridd, Dan Godfrey, and Henry Clay, which may be noted as doing well northwards of Tweed. It is very creditable to see Scottish growers competing thus successfully with those more favourably situated in the South and Midlands of England.

For twelve Selfs and Fancies, Mr. H. S. Bartleet, Severndroog, Shooter's Hill, Kent, led off with good blooms of Lady Hermione, Persimmon, Grand Duke, Allegro, Cin Mars, Anthoren, Endymion, Dudley Stuart, &c. Mr. D. Walker led in class 37 for six dissimilar Selfs and Fancies; while for a similar amount of white ground Picotees the same Scottish "Carnationist" was to the fore; Mr. M. V. Charrington was second. Mr. T. L. Harrison of Broxbourne, Herts,

had a good set of six yellow ground Picotees which won for him first place here; the second and third awards full respectively to Mr. D. Walker and Mr. C. L. Gordes of Peckham, each with strong blooms.

Class 40 was open only to those who had not previously won a prize at a National Carnation Show. Here Mr. F. D. Hessey, of Finohley, was a very creditable exhibitor of Brodick, Eldorado, May Queen, Albueria, Germania, Perseus. Messrs. Taplin & Sons were here second, but surely they have exhibited before and won prizes. Mr. E. Andrews of Worcester was a thoroughly good third with a highly creditable six.

SINGLE SPECIMENS: Bizarres and Flakes.—Six prizes are awarded for each class of specimen blooms in scarlet bizarres, crimson ditto, and pink ditto; and the same for flakes, selfs, Fancies, and Picotees. We cannot enumerate all of these; suffice it to say that the principal winners were Messrs. J. J. Keen, D. Walker, F. Wellesley, E. Charrington, Robt. Sydenham, R. C. Cartwright, M. R. Smith, and Went. Their best blooms were R. Houlgrave, J. H. Hedderley, W. Skirving, Chas. Henwood, and Mrs. Rowan, all flaked vars.; Ensign, Mrs. D. Pitman, Sabley, Britannia, and Benbow, all selfs; and Gny Sebright, a Fancy sport; and Ossian, another good Fancy. The same exhibitors were amongst those who shared the awards for single Picotees, and the best blooms here were Somerhill, Muriel, Grace Darling, Ganymede, Little Phil, and Childe Harold.

CARNATIONS AND PICOTEES IN POTS.—Mr. M. R. Smith of Hayes exhibited in the forty-fourth class, asking for twelve specimens of Carnations from all sections, to be exhibited in 8½-inch pots. He led, and had the following sorts: Hildegard, white self; Argosy, yellow ground Fancy, rosy flaking; Daniel Defoe, pale yellow ground Picotee, rosy edge; and Gronow, a deeper toned Picotee. The buff coloured self named Swashbuckler was present, also Agnes Sorrel, crimson self; Joan of Arc, rosy self; Childe Harold, sulphur ground and wire-edged Picotee; Apollo, rather deeper in colour; Fanny, a bright deep pink Picotee, with pale cream ground; Goldylocks, bright canary ground and pale flaking; and lastly, Othello, with buff ground and heavy crimson edge, a good Fancy. The "grass" was clean, robust, and strong. Mr. Chas. Turner was a fair second, his plants being smaller and not so strong; and third Mrs. Whitbourne. Messrs. M. R. Smith, C. Turner, and J. Carruthers were placed in this order for specimen pot plants, having respectively Dot, Alexandra, and Much the Miller (?).

For a group of Carnations, arranged in a space to occupy 30 square feet, in the shape of a D, Mrs. Whitbourne (gardener, Mr. J. Enston) of Ilford led with a very handsome group of well-flowered plants, clean and robust, all creditably set up. The blending was tastefully performed. A. F. Fitter, Esq. (gardener, Mr. W. A. Hurst), 15, Streatham Hill, was second. The groups were good this year, and perhaps, too, more numerous than at last show.

Mr. M. R. Smith was again placed clearly first for a large group of pot Carnations covering 50 square feet, and Mr. C. Turner second.

For a dinner table, arranged for twelve persons, and decorated entirely with Carnations, the first honour here was captured by Mr. C. Blick, gardener to the president of the Society. It appeared rather too close and heavy, but was pleasing, the blooms used being mostly yellow ground Fancies and Picotees, with here and there a dark crimson self; Carnation foliage and Asparagus was employed.

There seemed to be only one entry in class 49, for a vase of Carnations or Picotees, and second prize was accorded to Mrs. Whitbourne with a very nice display. For three ladies' sprays, 12 inches in length, second prize fell to Mrs. Hadley of Reigate, and third to Mrs. Whitbourne; while for six buttonholes Mrs. Whitbourne was first and Mr. S. F. Solley, Forest Hill, second.

PREMIER BLOOMS.—Premier self, Ensign, pure white, from Mr. M. R. Smith; light edged white ground Picotee Summerhill, from Mr. R. Smith; light edge yellow ground Picotee Childe Harold, from Mr. R. Smith; heavy edged ditto, Gronow, from Mr. R. Smith; Premier flaked Carnation, John Wormald, from Mr. R. C. Cartwright; white ground Picotee, heavy edge, Lady Louise, from Mr. J. J. Keen; Fancy, Muleteer, from Mr. W. Spencer, Windsor; bizarre, R. Houlgrave, from Mr. J. J. Keen.

CERTIFICATED VARIETIES.—*Self Carnation Mrs. Guy Sebright* (Mr. M. V. Charrington).—A beautiful rosy-pink variety with robust "grass," and good qualities as a bloom (first-class certificate).

Uralis (Mr. V. H. B. May, Malvern).—A pale lilac or dark slaty-mauve flower, slightly shaded with rose; very distinct, and in a way peculiar. We believe it is a Fancy (first-class certificate).

Carnation Lady Constance Butler (Mr. E. Charrington).—A lovely yellow-ground Fancy. It has a pale creamy ground, prettily flaked with rose; the flowers are large, well-formed, and with non-splitting calyx (first-class certificate).

Miscellaneous Exhibits.—These were not so numerous, but good, what were of them. Messrs. J. Veitch & Sons, Ltd., exhibited a group of Carnations in pots. We referred in last week's issue to the better varieties, as seen at their Chelsea nursery.

Messrs. J. Laing & Sons, Forest Hill, S.E., staged a very large selection of their splendid strain of single and double-flowered tuberos Begonias, and had also a batch of hybrid multiflora Streptocarpuses in many colours, together with displays of cut Roses, Carnations, and hardy herbaceous flowers—Delphiniums, Erigerons, &c., not omitting some Sweet Peas. They also had trained pot Ivies.

Mr. Henry T. Dixon, Hailsham Sussex staged an assortment of

beautiful Sweet Peas and Carnations, while Sweet Peas alone were tastefully arranged in liberal array from Mr. F. G. Foster of Havant.

Messrs. John Peed & Son, Roupell Park Nursery, South Norwood, S.E., staged a magnificent selection of Sweet Peas and hardy herbaceous flowers of all sorts, each strong and good. Their best varieties included Emily Eckford, Oriental, Golden Gate, Blanche Burpee, Lovely, Gorgeous, Salopian, Navy Blue, Stanley, Grey Friar, and America. Their exhibit of Sea-Hollies, herbaceous Pentstemons, and Phloxes were fine indeed.

New Carnations came from Mr. J. Douglas of Edenside, and a splendidly set-up table of cut Carnation blooms from Messrs. W. Cntbush & Sons of the Highgate Nurseries, London, N. Some of the more prominent and "taking" varieties here included were Malmaisons Mrs. Trelawny, Sanlt, light rosy red, together with the yellow self Cecilia, the dark red Mephisto, Kirdford, a distinctive red; His Excellency, and Miss Audrey Campbell, the latter a good yellow Self.

National Rose, Ulverston, July 16th.

Under the auspices of the old-established and successful North Lonsdale Society, the northern provincial exhibition of the National Rose Society came off in tropical weather on Wednesday, the 16th inst., in the picturesque Tod Bush Park at Ulverston. Save for the first visit to Ulverston in 1896, this particular show has not hitherto been held further north than Darlington, and rosarians of North Lancashire are naturally very proud of the double honour which has now been conferred on the district. A grand military band enhanced the attractions of an extensive and beautiful floral spectacle, and the function was graced by a large and fashionable gathering, visitors from all parts of the country being present. Prizes of the value of over 300 guineas were offered for competition, and the leading nurserymen and amateurs of the United Kingdom, including the chief prizewinners at the Temple Show, figured in the list of awards. The date of the exhibition admirably suited the competitors in the open classes, whose maiden blooms in immense quantities have now attained the acme of perfection, and connoisseurs were enchanted with the splendid quality, variety, and abundance of exhibits. Mr. Ed. Mawley, one of the secretaries of the National Society, described it as "the" Rose show of the year; in fact, he admitted that for all-round excellence he had seldom, if ever, seen it beaten outside the metropolis.

NURSERYMEN.—In an exceptionally strong class of thirty-six, distinct, Messrs. Alex. Dickson & Sons of Newtownards carried off the society's handsome Jubilee challenge trophy and gold medal with a really superb assortment in regard to size, substance, brightness, and contour. The varieties staged included Horace Vernet, Duke of Wellington, Mrs. Jno. Laing, Her Majesty, Comte Raimbaud, Alice Grahame, Marchioness of Londonderry, Thos. Mills, Mrs. W. J. Grant, Xavier Olibo, E. Levet, Souvenir d'Elise Vardon, Star of Waltham, Duchess of Portland, Fisher Holmes, Madame E. Verrier, Reynolds Hole, E. Metz, Prince Arthur, Alice Lindsell, Lord Macanlay, Mildred Grant, Chas. Lefebvre, Duchesse de Morny, Helen Keller, Countess Caledon, P. Notting, Bessie Brown, A. K. Williams, Madame Hoste, Capt. Hayward, Ulster, D. Jamain, Robt. Scott, Madame Crapelet, and Edith D'Ombra. In the same class Messrs. Harkness & Sons of Bedale, Yorks, who have won the trophy nine times out of thirteen, were second with a remarkably good and even set; and Messrs. Perkins and Sons of Coventry a creditable third. Messrs. A. Dickson & Sons were also first winners with forty-eight single trusses, sixteen triplets, and twenty-four triplets, the second prizetakers being respectively Messrs. Harkness & Sons and B. R. Cant & Sons, Colchester. For thirty-six, distinct (B division), Mr. Geo. Prince of Berks was awarded the premier honour, Messrs. J. Burrell & Co. of Cambridge being second. In the Tea and Noisette section Mr. Geo. Prince staged eighteen exquisite blooms, and won the first prize with Maman Cochet (for which he was also awarded the society's silver medal), Princess of Wales, The Bride, Mrs. E. Mawley, Bridesmaid, Hon. E. Gifford, Madame Cusin, Comtesse de Nadaillac, Ernest Metz, Etoile de Lyon, Souvenir d'un Ami, Marie Van Houtte, Catherine Mermet, Maréchal Niel (N.), Souvenir d'Elise Vardon, and Golden Gate. Messrs. Dickson & Sons were second; and Messrs. W. & D. Croll of Dundee third. Messrs. Burrell & Co., for twelve Teas and Noisettes, obtained first honours; Messrs. Mattock and Sons of Oxford being second. Messrs. D. & W. Croll secured the society's silver medal for the best Hybrid Tea with a lovely Mrs. W. J. Grant; the silver medal for the best Rose, other than H.T., T., or N., falling to an equally beautiful Horace Vernet, displayed by Messrs. Perkins & Sons.

NURSERYMEN AND AMATEURS.—In this section Messrs. A. Dickson were again well to the fore, winning firsts for twelve new Roses, distinct, and twelve blooms of any white or yellow, with Bessie Brown, and twelve triplets of Teas and Noisettes, besides carrying off the society's gold medal for three trusses of their handsome new seedling Edith D'Ombra. For twelve pink or rose-coloured Roses Mr. Hugh Dickson of Belfast came first with Mrs. W. J. Grant. Messrs. Perkins and Sons were placed first for twelve blooms of any light or dark crimson with Horace Vernet, Mr. Hugh Dickson being second. Of exhibition Roses in vase, twelve distinct varieties, seven blooms of each, there was a perfectly lovely display, and first honours went to Mr. Geo. Prince, Messrs. A. W. Paul & Sons, Hereford, being a good second.

the section for garden or decorative Roses, Mr. John Mattock was placed first and Messrs. Paul & Sons second.

AMATEURS, OPEN.—For the Jubilee challenge trophy, gold medal, and £3, offered for twenty-four, distinct, the competition was exceedingly keen, and Mr. E. B. Lindsell of Hitchin was heartily congratulated on his well deserved success. He relied for his victory upon Mrs. J. Laing, Fisher Holmes, Duc d'Orleans, D. Jamain, Catherine Mermet, Duke of Wellington, Madame G. Verdier, Horace Vernet, Madame Cusin, Chas. Lefebvre, Victor Hugo, Maman Cochet, The Bride, Duchess of Bedford, A. K. Williams, Souvenir d'Elise Vardon, Earl Differin, Helen Keller, Prince Arthur, Bessie Brown, Alfred Colomb, Beauty of Waltham, and Marchioness of Londonderry. Mr. J. W. Tattersall of Morecambe took the second prize; and Mr. W. Boyes, Derby, and the Rev. J. H. Pemberton, Essex, were adjudged equal third. Mr. E. B. Lindsell was also first for thirty-six, distinct, and eight triplets; Mr. H. V. Machin of Gateford Hill, Worksop, and the Rev. J. H. Pemberton respectively carrying off the seconds. Mr. F. W. Tattersall was awarded the premier place for nine blooms of any Rose except T. or N., Mr. H. V. Machin being second. Mr. R. Foley Hobbs, Worcester, staged blooms good enough to win firsts for eighteen, distinct (division D), six distinct triplets, and six singles. In division E Mr. Whittle was first for twelve distinct, a capital set; Mr. S. Morris, Leicester, being second, and Mr. George Moules, Hitchin, third.

In division F Mr. W. Upton was first for six singles, Mr. R. L. Garnett, Leicester, being second, and in a class open to all amateurs Mr. J. H. Midgley of Grange won the first prize for six singles. In the Tea and Noisette section Mr. C. Jones, Gloucester, carried off the first prize for twelve distinct, and also for nine blooms of any one variety, the second prizetakers being Mr. Alex. A. Gray, Bath, and Mr. H. V. Machin. First honours for garden or decorative Roses were won by Mr. H. V. Machin and Mr. Edw. Mawley, Hereford. Mr. H. P. Langdon of Brentwood, Essex, was adjudged first for six blooms of any one variety, and R. Foley Hobbs first for six blooms of any one variety. Mr. F. W. Tattersall secured two of the society's silver medals with perfect specimens of Bessie Brown and Captain Hayward, Mr. C. Jones obtaining the third silver medal for the best Tea or Noisette with Maman Cochet.

LOCAL: CLASSES—In the class for twelve distinct, Mr. F. W. Tattersall was the winner of the local society's gold challenge cup, held last year by Mr. R. L. Garnett of Lancaster, who was now placed second; also of the Woodburne challenge trophy, for the best bloom in this section (Countess Caledon), and the society's bronze medal for the best dark H.P. with Horace Vernet. The Ulverston Urban Council's challenge cup, and the society's silver medal for the best nine, distinct, was deservedly won by Miss Nina Dickson of Newby Bridge, Lakeside. Of Sweet Peas, Stocks, and Pansies there was a particularly good display.

In the non-competitive department Mr. A. Edwards of Notts had an extensive show of his beautiful floral and Fern specialties for decorative purposes. Mr. Robt. Boulton of Warten, near Carnforth, made a marvellously brilliant display of Sweet Peas, embracing every known shade. Messrs. Dicksons of Chester showed a superb assortment of decorative Roses in vases, bouquets, and herbaceous flowers; and the attractions of the exhibition were further enhanced by a really beautiful collection of Carnations, Picotees, Roses, Sweet Peas, &c., by Mr. F. E. Boyes of Blackpool, and herbaceous plants, &c., by Messrs. Mawson Bros., Windermere.

Reigate Horticultural, July 17th.

The fifteenth annual show of the Borough of Reigate Cottage Garden and Horticultural Society was held, by kind permission of G. C. P. Hull, Esq., in the beautiful grounds of The Mount, Earlswood, on Wednesday, July 17th. The weather was piping hot. With the additional feature of a good brass band the numerous visitors had a splendid afternoon's enjoyment. Mr. W. Punton, as hon. secretary, had his efforts crowned with success, for the show was perhaps as fine all-round as it ever has been. Roses were scarce, but the entries for foliage and flowering plants were as good as formerly. Some splendid exhibits of fruit from the gardens around Reigate were staged. The district is one in which there is great prospect for more advanced exhibitions of this kind, and the committee can still go a few steps further, and combine other attractions with their flower show, so that the latter may be the more patronised.

In class 131 of the gardeners' section, for a group of plants arranged D shape, 50 super feet, the first prize of £3 went to Col. Inglis (gardener, Mr. F. Phillips), whose group was exceedingly fine. He staged grand plants of *Trachelium caeruleum*, *Gloxinias*, *Phyllanthus*, *Crotons*, *Dracaenas*, *Caladiums*, and one or two nicely flowered *Orchids*. The group was edged with pale green-coloured *Pilea muscosa*. R. B. Evered, Esq., was first; and M. Marcus, Esq., second for a larger group in class 130. Mr. G. Hull (gardener, Mr. H. Pottle) was the only exhibitor of four Ferns, staging two *Adiantums*, *Nephrolepis*, and an *Acrostichum*. J. Welch, Esq. (gardener, Mr. D. Bone) set up the best four *Fuchsias*; and G. Jackson, Esq. (gardener, Mr. W. Hunt), came second with much smaller plants. Col. Inglis again led in the class for six *Gloxinias*, he having magnificent plants. G. Jackson, Esq., was a fair second. R. B. Evered, Esq. (gardener, Mr. T. P. Carr), had four handsome *Caladiums*; the second place going to Mrs. Waite (gardener, Mr.

W. Jackson). Mrs. Champion staged the neatest half dozen table plants, including three dwarf well-coloured *Crotons*, one *Cocos*, and two graceful *Dracaenas*. R. B. Evered, Esq., was second; and M. Marcus, Esq. (gardener, Mr. J. B. Mead), third. The first prize lot were far and away best. For four foliage plants, distinct, Mrs. Waite here was the winner with a poor enough selection, good plants, but not at all choice; the second place was accorded to R. B. Evered, Esq., who had a magnificent *Ananassa*. The latter also won for a specimen foliage plant with a moderate sample of *Anthurium crystallinum*. Mrs. Waite added to her honours the first prize for four greenhouse plants in flower, having *Trachelium caeruleum*, *Lilium lancifolium*, *Begonias*, &c. J. Welch, Esq., formed a good second. For four Ferns, distinct, R. B. Evered, Esq., led with excellent sample *Adiantums* and *Nephrolepis*. J. Welch, Esq., again was foremost for four double tuberous *Begonias* with good plants. G. Taylor, Esq. (gardener, Mr. W. Seaman), came second.

For twelve bunches, in not less than eight varieties, of cut flowers, some good entries were staged. The first prize was adjudicated to Col. Inglis with hybrid multiflora *Streptocarpus*, *Cypripedium insigne*, *Anthurium Scherzerianum*, *Bougainvillea*, *Lapageria alba*, and other species. The second prize fell to S. W. Grant, Esq. (gardener, Mr. T. Sparks), with a fine bunch of *Lælia*, and third G. Taylor, Esq. (gardener, Mr. W. Seaman); all were good. For twelve bunches of herbaceous cut flowers the award was captured by F. W. Champion, Esq. (gardener, Mr. J. Fitt), with massive selections, including *Eremurus Bungei*, *Delphinium*, *Eryngiums*, *Gaillardias*, and *Lychnis chalcedonica*. J. Welch, Esq., was awarded second in class 145, having a splendid inclusion of lovely *Salpiglossis*. There were two equal thirds.

Fruit.—Col. Inglis came off first for a collection of eight dishes of fruit, including a beautiful Melon, green Gooseberries, White Currants, Figs, Cherries, Nectarines, white Grapes, and Strawberries. G. Taylor, Esq., led for three bunches of Grapes, having two Black Hamburg and one of Buckland Sweetwater. The latter was hardly ripened, but was on the whole a very good bunch. Mrs. Champion came second; this lady also won for six Peaches. Mr. Geo. Doe led for a single Melon, Col. Inglis being second. Mrs. Champion had the best dish of Nectarines, and M. Marcus, Esq., the best dish of Cherries. All the fruit shown was of a very high standard. Exhibitors should name all varieties, however, otherwise those who prepare the reports cannot stop to consider what this or that may be.

Vegetables—F. Vigers, Esq. (gardener, Mr. W. Leppard), had the first honours in class 152 for a collection of eight distinct kinds of vegetables. He staged good heads of Cauliflowers, Tomatoes, Carrots, Beet, Potatoes, Peas, Cabbages, and Runner Beans. S. W. Grant, Esq. (gardener, Mr. T. Sparks), was a fair second, but his lot were not set off to the best advantage. J. Welch, Esq., came a close third. R. B. Evered, Esq., led for a brace of Cucumbers; Mrs. Champion for Tomatoes; E. Hull, Esq., again for a collection of salads; and J. Welch, Esq., came second here.

Roses.—In the Rose section, for nine distinct Roses, Mrs. W. Dawson was awarded first, and G. Taylor, Esq., second. In class 167 Mrs. F. W. Champion led for twelve varieties of garden Roses with the best lot in the show. Papa Gontier was A1, W. A. Richardson, Crimson Rambler, Macrantha, Bardou Job, and Perle d'Or were all exceedingly pretty. For twenty-four distinct single Roses P. Burnand, Esq., led with a moderate set of blooms, including Her Majesty, Horace Vernet, Maman Cochet, Xavier Olibo, Merveille de Lyon, Duchess of Bedford, Margaret Dickson, Alfred Colomb, Marie Van Houtte, Catherine Mermet, Gen. Jacqueminot, Anna Olivier, Duke of Edinburgh, La France, Rosieriste Jacobs, Captain Hayward, Helen Keller, Le Havre, Souvenir de S. A. Prince, Sir Rowland Hill, Comtesse d'Oxford, Mrs. W. J. Grant, Comtesse de Nadaillac, and Prince Arthur. Mrs. F. W. Champion was a good second, having handsome blooms of Clio, White Maman Cochet. For twelve blooms of any variety Mrs. Champion led with as fine samples of Maman Cochet as we have recently seen.

Mrs. J. P. Pearson won the challenge prize of a diamond and pearl brooch (value £10 10s.) for a table decorated with Roses, and to seat eight persons. Her arrangement was light, free, and graceful, and wholly in pink, cream colour, and green. Miss West came as a very close second with a pretty tea-coloured display, and Mrs. F. Morris third. Cottagers' produce was good and fairly plentiful. Mr. J. Williams, from Ealing, staged his table decorative designs for holding flowers. Messrs. Lanaway & Sons, 26, Station Road, Redhill, had an assortment of garden tools, garden labels, knives, mowers, and sundries.

Mr. J. Carlton, Tunbridge Wells, set up a collection of herbaceous cut flowers, including *Dicentra eximia*, *Lychnis chalcedonica*, *Scabiosa caucasica*, and other seasonable subjects.

Messrs. Peed & Sons, Roupell Park Nurseries, West Norwood, S.E., had a grand lot of Sweet Peas, including such varieties as Countess of Radnor, Lady Marie Currie, Duke of Sutherland, Painted Lady, Blanche Burpee, Royal Rose, Othello, Mrs. Sankey, Blushing Beauty, Lady Mary Currie, Miss B. Ferr, Salopian, and Lottie Hutchins. They also staged herbaceous cut flowers, and a particularly good scarlet self Carnation named R. H. Measures, with non-splitting calyx. Messrs. J. Cheal & Sons, Crawley, staged Roses, *Gloxinias*, good strain; *Rhus cotinoides*, Sweet Peas, *Delphinium Charles Eade*, light blue with rose shading and other varieties. *Galega compacta* is an exceedingly handsome border subject.

Mearns Rose, July 20th.

The annual display of Roses under the auspices of the Mearns Rose Society was held in the Public School on Saturday. The supporters of this society were fortunate in having one of the finest days of the past beautiful week on which to hold their exhibition. The morning was dull, and was in the favour of the rosarians. The entries were much in excess of previous years, and many new additional competitors came forward to see what they could do at this popular society's show. Owing to the exceptionally early season, England was not represented, and much regret was experienced when it became known that Messrs. Mack & Son, B. R. Cant & Co. and Frank Cant & Co. of Colchester, Messrs. Harkness of Bedale had not arrived. However, notwithstanding the absence of these growers, there was an extraordinary display by the Scottish and Irish cultivators.

In the nurserymen's section for sixty blooms Roses, distinct, Messrs. D. & W. Croll, Dundee, took first prize with an excellent group, including Duchesse de Morny, Comte de Raimbaud, Captain Hayward, Etienne Levet, Clara Watson, Heinrich Schultheis, Duke of Albany, Glory of Cheshunt, Mme. Abel Chateney, Jeannie Dickson, Caroline

Caroline Testout, Marie Finger, Victor Hugo, Alfred Colomb, Marchioness of Londonderry, A. K. Williams, Duke of Wellington, and La France.

In the class for thirty-six blooms Mr. Hugh Dickson scored high taking the lead with exceptionally good flowers, including Gladys Harkness, Duke of Wellington, White Maman Cochet, Suzanne Marie Rodocanachi, Horace Vernet, Victor Hugo, La France, Marie Finger, Her Majesty, Chas. Lefebvre, Danmark, E. Y. Teas, Rev. Alan Cheales, and Comte de Raimbaud. The second prize fell to Messrs. Alex. Dickson & Sons, and contained some remarkable blooms of Jeannie Dickson, Margaret Dickson, Mrs. W. J. Grant, Captain Hayward, Lady Moyra Beauclerc, Queen of Queens, and Tom Wood. The Messrs. Croll came third with Madame Joseph Bonnaire, Bessie Brown, Souvenir de President Carnot, Bladud, Lady Mary Fitzwilliam, Killarney, and Caroline Testout.

The class for twenty-four Teas was won by Messrs. Alex. Dickson and Sons with a good stand containing Mrs. Edward Mawley, Madame Hoste, Muriel Grahame, Innocente Pirola, Madame P. Morgan, Caroline Kuster, Madame Cusin, Innocente Pirola, and White Maman Cochet. Messrs. D. & W. Croll came second, followed closely by Messrs.



MESSRS. WALLACE'S GROUP OF LILIES. (See Notes on page 76.)

Testcut, Gustave Piganeau, Countess of Oxford, Beauty Lyonnaisse, Kaiserin Augusta Victoria, Duchess of Bedford, Jacobs, Général Jacqueminot. The second prize fell to those wonderful growers, the Messrs. A. Dickson & Sons of Newtownards. The blooms staged were exceptionally good, but it was noted that they were not so heavy as Messrs. Croll's. In this stand the best H.P. in hall was selected—namely, Horace Vernet, and it was out of the same stand that the best H.T. was selected—namely, that new wonderful Rose of theirs, and which drew considerable attention by growers, Mildred Grant. The leading varieties employed by Messrs. Dickson were Earl of Dufferin, Duchesse de Morny, Lawrence Allan, White Lady, Marquise Litta, Bessie Brown, Souvenir de President Carnot, Mrs. Ed. Mawley, Mildred Grant, Shalman Crawford, Gustave Piganeau, White Maman Cochet, Countess of Caledon, Horace Vernet, Ulster, Mrs. W. J. Grant, and Alfred Colomb. Mr. Hugh Dickson of Belmont, Belfast, secured the third place. His blooms showed a slight decrease with those of the Messrs. Crolls and Dickson, but, on the whole, were exceptionally good for the season. His varieties contained Earl of Dufferin, White Maman Cochet, Seedling No. 3, White Lady, Marquise Litta, Gustave Piganeau, Souvenir de President Carnot. The fourth prize was awarded to Messrs. D. Robertson of Helensburgh. Owing to the early season this great grower was severely handicapped, but notwithstanding the dry season he showed several heavy blooms, the most noticeable being

D. Robertson & Co. The latter had most beautiful blooms of Golden Gate, Ernest Metz, Medea, The Bride, and Muriel Grahame. For a stand of twelve blooms of new Roses since 1897 Messrs. A. Dickson & Sons secured the first place, and had some magnificent blooms of Baldwin, Countess of Caledon, the handsome new Rev. Alan Cheales, Miss Ethel Richardson, Daisy, Gladys Harkness, Mrs. Mawley, Alice Lindell, Florence, and Mamie. The second prize fell to Messrs. D. & W. Croll, who also had some perfect blooms. For twelve H.P.'s of one variety the Messrs. A. Dickson & Sons again scored with fine specimens of Capt. Hayward, while Hugh Dickson came second with Suzanne Marie Rodocanachi. Messrs. A. Dicksons had the first prize for twelve H.T.'s of one variety, and contained fine blooms of Bessie Brown. Messrs. D. & W. Croll scored second with Mrs. W. J. Grant. For twelve Teas of one variety Messrs. Croll were placed first with The Bride, while Messrs. A. Dickson won the second place with The Bride, also for a display of Roses 5 feet by 2½. Messrs. A. Dicksons & Sons gained the first place without opposition, and had some fine sprays.

In the gardeners' sections the blooms were rather heavy, and many of them came up to the nurserymen's standard. Mr. W. Parlange of Row secured a goodly number of prizes with his exceptionally heavy blooms. Mr. S. H. Strang of Westwood, Bushy, had beautiful exhibits, and also secured many tickets. In the class for twenty-four blooms Mr. Parlange got the first place; and Mr. John Russell of Prospect

House, Mearns, secured second. For the silver cup, presented by Mr. Hugh Dickson of Belfast, for six H.P.'s and six Teas, Mr. Parlane was the winner with extra blooms; while Mr. L. Black of Kinglassie, Fife, came second, also with a fine stand, although thin a bit. Mr. McGhie, gardener to Mr. W. M. Melville of Hazelden, secured first places in all his stands, and had remarkable Roses. It was noticeable from the blooms staged that the growth of the Roses was exceptionally heavy. The trophy, open to all parishes, confined to gardeners and amateurs, for twenty four blooms, distinct, was won by the Mearns parish, and the blooms were all staged from Mr. Melville's beautiful garden. In the amateurs' section the principal prizetakers were Mr. John Fyfe, Hazelden, who won several medals; Mr. F. Hamilton, gold medallist; and Mr. W. Sntherland of Lenzie.

Before closing it will not be out of place to mention a wonderful *Lilium auratum*, carrying five massive spikes of flower, each about 7½ feet high, and exhibited by Mr. John Murdoch, gardener, Todhill. Mr. Thos. M'Donald, gardener, of Southfield, exhibited some beautiful specimen Begonias.

Prescot, July 18th.

This, one of the most popular shows in the Liverpool district, was held in a portion of Knowsley Park, very kindly lent to the committee by the Right Hon. the Earl of Derby, K.G. Comparing former shows, there was the absence of Messrs. Pinnington, McFall, Bracegirdle, and George, whose groups and foliage plants were so distinctive as to meet the approbation of all lovers of stove and greenhouse plants, and instead small plants this year had to take their place. Nevertheless, the greatest praise must be given to those who helped to make the show a characteristic one, and on this score Messrs. Eaton, Fairclough, and Lyon are to be congratulated in the absence of the fine grower Mr. Bracegirdle, who was engaged at the Bootle Show on the same day. Before I commence to deal with the prize list, may I be permitted in my own name, and for the many who knew the late secretary, Mr. Robert Rigby, to say how deeply we all felt the news of his death on the eve of the show? He was only forty-four years of age, but his personality was such as to endear him to all, rich and poor alike. Only a few weeks ago I travelled with him on a railway journey, and his one great thought was this show. Roses were his delight, and it may be truly said that the closing words on the tablet addressed to the late Sir A. Sullivan would not be wrongly applied in his case.

The last red leaves fade
Round the porch of Roses;
The clock has ceased to sound,
The long day closes.

He was laid to rest on Saturday last, a very large number of friends and relatives being present.

Mr. H. Ogden, West Derby, was the only one who arranged a group, containing a very beautiful lot of plants neatly set up. Mr. T. Eaton, gardener to John Parrington, Esq., Roby Mount, had four well grown *Caladiums* and a single, and small but well-flowered greenhouse plants. *Clerodendron Balfourianum*, *Vinca alba*, *Ixora Pilgrimi*, and *Rhynchospermum jasminoides* were the prize four stove and greenhouse plants put up by Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, who also had some grand Begonias and Gloxinias, a well-bloomed plant of *Swainsonia alba* as a single greenhouse plant. He had richly flowered plants of *Cattleyas Sanderiana* and *Mossiae*, *Oncidium Lanceanum*, for the best three Orchids in bloom. His four pots of Tomatoes were solid, large, and rich in colour. Mr. J. Fairclough, gardener to J. Atherton, Esq., Hurst House, Huyton, had the best foliage plant, a *Kentia*, the best four *Coleus* extra fine, also three *Fuchsias* and a single specimen.

Mr. P. Greene, gardener to Colonel Thomas Gee, Allerton, had the best *Liliums*, Cockscombs, and single Begonia. The cut flowers were particularly good; one of the best stands of twelve herbaceous cut flowers ever staged in the Prescot Show being put up by Mr. John George, gardener to T. Henshaw, Esq., Whitefield House, Roby. These consisted of *Delphinium* seedlings, *Telekia superba*, *Erigeron superba*, *Cephalaria tatarica*, *Veronica insignis*, *Lychnis chalcedonica*, *Phlox*, *Lilium croceum*, *Monarda didyma*, *Coreopsis grandiflora*, and *Achillea Ptarmica* The Pearl. His first prize Sweet Peas and Carnations were also capital firsts. Messrs. Greene and F. W. Halsall also staged handsomely. Roses were not up to form, owing to the intense heat, but Mr. Greene was awarded the prize for eighteen distinct, Her Majesty, Mrs. R. G. S. Crawford, Mrs. J. Laing, Etienne Levet, Baroness Rothschild, and Caroline Testout looked the best; Messrs. Berry and F. W. Halsall followed. Mr. W. Barnes, gardener to J. C. Gamble, Esq., St. Helens, won with twelve; for six, T. Raffles Bulley, Esq., and for six light Roses Mr. Greene. Dahlia classes were taken by Mr. H. Banks, Aughton.

There was a choice lot of fruit staged, Mr. W. Oldham, gardener to Joseph Beecham, Esq., Ewanville, Huyton, winning with four dishes, Black Hamburg, Violette Hâtive Nectarine, Hero of Lockinge Melon, and Grosse Mignonne Peach being capitally represented. Mr. T. Eaton was a good second, Elruge and Bellegarde Peaches and Nectarines were conspicuous. Mr. J. Fairclough was a fine third. The Black Hamburg Grape class was a more than close one, the judges deciding in favour of Mr. Fairclough with small bunches; Mr. Bagnall, gardener to O. H. Boston, Esq., Charlwood House, Huyton, being second. Mr. Forbes, gardener to Mrs. Baxter, The Tower, Rainhill, was first for

Muscats, large bunches, and Mr. Oldham excellent Bucklands, and Mr. Fairclough with heavy good looking Madresfield Court. Mr. Eaton had the first with three splendid dishes of Tomatoes, also with Nectarines, Cherries, Strawberries, and Melon, all first-class in every way. Small fruits were magnificent.

Vegetables were the talk of the show, the handsome silver cup given by the Hon. Arthur Stanley, M.P., being taken outright by the well known grower Mr. J. Rainford, Whiston. His twelve had very special Celery, Alderman Peas, Conference Tomatoes, Ailsa Craig Onion, and Best of All Runners. It was a well deserved and popular victory, and he was greatly congratulated for it. Mr. J. Case was the second, and a good one too. Other vegetables were well shown, but space will not permit of names. Mr. H. Middlehurst of Liverpool had a certificate granted for an extensive collection of Sweet Peas, and Mr. Fairclough a good bunch of home grown Bananas. Mr. W. Case (secretary), Mr. Morris Mereen (president), and the working committee gave all the assistance possible to exhibitors and visitors.—R. P. R.

Bootle, Liverpool, July 18th.

It is well that there should be the great interest taken in horticulture by the wealthy inhabitants of this wonderful business town, for here in the superbly built docks and warehouses the splendid Atlantic liners from Liverpool lie sheltered, and some of the best commercial treasures are stored. Owing to the increasing population, Liverpool trams are run to every part, and there is an awakening in all directions. Derby Park, where the show was held, is a boon to all "Bootleites," from the fact that it is roomy and affords the Mayor and Corporation a fine resort for their garden parties, and the poorer folks a quiet resting place after the day's work is over. Under Mr. Drysdale's care everything is kept in perfect order, and the show has assumed quite decent dimensions, good prizes being offered and every attention being paid to visitors.

The principal prize was for a miscellaneous group of foliage and flowering plants, the first prize having with it a valuable silver cup, given by Lord Stanley, M.P. Last year's winner, Mr. J. Bracegirdle, gardener to Alderman W. H. Watts, J.P., Elm Hall, Wavertree, again secured the prize, thus winning it outright with an admirable arrangement, some lovely *Crotons*, *Liliums*, *Caladiums*, and *Cattleyas* being well toned down by the charming greenery introduced. Mr. H. Ogden, West Derby, also staged a very bright group, and took second honours. Mr. Bracegirdle was again in great form with huge Palms and a specially good *Dicksonia antarctica*. For three stove and greenhouse flowering plants and the same number of foliage, his exhibits were of the best specimens of cultural skill, *Bougainvillea Sanderiana*, *Cattleya Warneri*, *Erica retorta* major, *Anthurium crystallinum*, *Cycas revoluta*, and *Chamaerops excelsa* being the varieties. He also put up splendid Ferns, *Davallia fijiensis* and *Mooreana*, *Cibotium Schiedei*, and *Nephrolepis davallioides furcans*, and extra good *Crotons* of *Mortfontainensis*, *Queen Victoria*, and *Weismanni*. Other exhibitors showing well in these classes were Mr. Geo. Osborne, gardener to Dr. Duffus, The Brook, and Mr. H. Ogden. Small fruits were of the best quality, and good vegetables in abundance, and the encouragement given to cottagers met with a hearty response.

There were many good Roses, but that clever Formby grower, Bernard Kennedy, Esq., secured the special for eighteen, Maman Cochet, Mrs. R. G. Sharman Crawford, Alfred Colomb, and Caroline Testout being extra fine. Other classes showed good culture. Tomatoes ought specially to be singled out, being solid, bright and shapely. During the afternoon there was a most encouraging attendance, many members of the council, with their ladies, taking great interest in the exhibits. Sweet Peas in bamboos were staged by Mr. C. A. Young, West Derby, and very much admired.—R. P. R.

Cardiff Horticultural, July 17th.

Cardiff Show was an unmistakable success this year, having fully 200 more entries over the total of last year. There was plenty to attract and interest all classes of visitors. Those who loved music enjoyed selections from the band of the Scots Guards; the practical gardener had the benefit of a demonstration in fruit drying by Messrs. Lumley & Co., while an exhibition of photographs and paintings furnished a valuable feature in the eyes of numerous visitors. The Mayor of Cardiff, with the Mayoress, formally opened the show. There was a luncheon in the afternoon.

The gold medals of the society were awarded to the following for the trade exhibits mentioned:—Messrs. H. Cannell & Sons of Swanley for collections of Cannas; Mr. John Russell, Richmond Nurseries, Surrey, Tree Ivy; Messrs. B. R. Davis & Son, Yeovil, collection of Begonia blooms; Messrs. Cooling & Son, Bath, collection of garden Roses; Mr. Andrew Pettigrew, Cardiff, groups of miscellaneous plants, pot Vines, and fruit; and Messrs. Wm. Clibran & Son, Altrincham, group of plants. Silver medals were awarded to Mr. Henry Eckford of Wem, Shropshire, for Sweet Peas; Messrs. Dicksons, Ltd., Chester, cut flowers; Messrs. Robert Veitch & Son, Exeter, cut flowers, rock plants, &c.; Mr. U. Pettigrew, St. Fagan's, Sweet Peas; Messrs. Jarman and Co., Chard, cut flowers; Messrs. Garaway & Co., Bristol, collection of plants; Messrs. Phelps & Co., Llanishen, Roses; and Mr. J. B. Blackmore, Twerton-on-Avon, cut Begonia blooms. A certificate of merit

was awarded to Mr. Walter L. Pattison, Shrewsbury, for Pansies and Viola blooms.

In the open classes for plants, in class 1, Mr. W. J. Buckley of Llanelly beat Mr. J. Lynn Thomas, Cardiff. For four distinct stove or greenhouse plants in bloom Mr. J. Cypher from Cheltenham was foremost, and Mr. Buckley second. The same competitors were so placed for a group of plants covering 150 superficial feet. Mr. A. Henderson led for twelve table decorative plants. Roses were good on the whole, though greatly tried by the heat and prolonged drought. Most of the leading western growers, including Messrs. D. Prior & Sons from Colchester, competed. Messrs. S. Treseder were second for a dozen Teas, also for twelve of any one variety, and in some other entries. Mr. Ralph Crossling obtained the Royal Horticultural Society's silver medal for the best exhibit out of seven Rose classes. For a collection of hardy flowers, in varieties, 12 feet by 3 feet, Mr. W. Treseder was first; Messrs. Isaac House & Son second; and third Messrs. W. J. Hokes & Son, Trowbridge. Messrs. I. House & Son came off with first honours for eighteen distinct varieties of Sweet Peas in vases.

In division D, for fruit, class 54, Sir T. Morel, Penarth, led for two bunches of any black Grape; Mr. T. Mansel Franklin, Cowbridge, followed. Mr. E. H. Ebsworth won for two bunches of white Grapes, and Mr. Franklin was again foremost for a specimen bunch of any black, and Mr. S. Dean for any white. Mr. A. Pettigrew easily held first place for a white-fleshed Melon, and Mr. Buckley for the scarlet-fleshed. For six dishes of dessert fruits, one variety of Grapes only, and Pine excluded, Mr. A. Henderson was first, and Mr. James Lloyd second.

For a collection of nine distinct kinds of vegetables, Lady Guest's redoubtable gardener here led, winning also an R.H.S. bronze medal; Mr. A. Henderson was second. The horticultural trade was represented by exhibits from all parts of the country.

Durham, Northumberland, and Newcastle Horticultural and Botanical, July 23rd.

This society held the seventy-seventh annual summer show in the Leazes Park, Newcastle, on the 23rd and 24th July. The entries for this year's show have been more numerous than in the last few years, the Roses forming a special feature; herbaceous cut blooms were also superb. Stove and greenhouse plants were better shown than they have been for many years. The non-competitive section was also well represented.

OPEN DIVISION.—Group of miscellaneous plants, Mr. H. H. Hillier was first, and Mr. F. Edmondson second. For six plants in bloom, Messrs. Jos. Ellison, S. Bewick, G. W. Pinkney, were placed in this order. For three Orchids, distinct, Mr. E. Hopper led; followed by Mr. S. Bewick; and third Mr. J. McIndoe. Mr. S. Bewick again won for six Gloxinias; Mr. J. Harris coming second, and Mr. G. W. Pinkney third. For three Dracaenas, Mr. R. Arthur first, and Mr. F. Edmondson second; while for three Crotons Mr. Arthur and Mr. Harris were first and second respectively. For four single tuberous Begonias Mr. J. Hunter beat Mr. J. Harris. Messrs. Walker and H. H. Hillier were placed so for six table plants. The honours for cut Roses arranged for effect were pretty fairly divided amongst the leading nursery growers, including Mr. Hugh Dickson, Messrs. D. & W. Croll, and Messrs. Harkness & Sons. These secured the bulk of the honours. As our representative at the show, however, furnished no names of varieties, and no critique on their qualities, it would be unwarranted to give mere lists of prizewinners.

Messrs. Kerr Bros., Dumfries, N.B., did well in the hardy flower classes, winning quite a number of prizes. Amongst those who displayed their prowess in floral decorations, as represented by bouquets, epergnes, buttonholes, and the like, were Messrs. F. Edmondson, J. H. Bygate, M. Purvis, G. Webster, and Thomas Battensby. In the classes for fruit, such renowned northern growers and successful exhibitors as Mr. J. McIndoe of Guisborough, Mr. W. Nicholls, Mr. J. C. McPhearson, and others, met together for the various awards. Mr. McIndoe led for four bunches of Grapes, but came second or third in a good many other classes. Mr. Thomas Cowperthwaite was foremost for two bunches of white Grapes, and for four dishes of fruit Mr. G. Fullett led off. For a dish of Peaches Mr. E. Hopper came forth with leading honours.

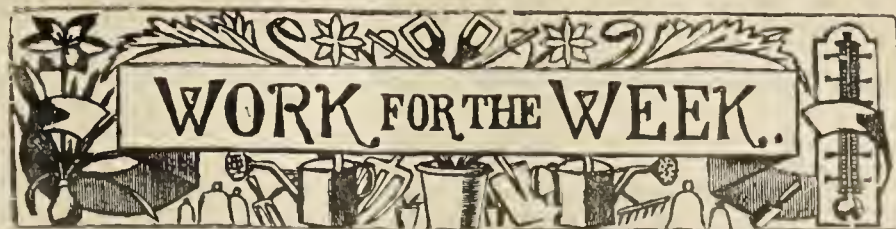
The pick of the prizewinners in the plant classes were Messrs. J. Ellison, J. Harris, S. Bewick, J. Hunter, W. Dodds, and T. Wilkinson; while for Roses we may name Messrs. Melville, Jas. Gardiner, jun., and E. Taylor. For twenty-four Fancy Pansies, in distinct varieties, Mr. Melville beat Mr. Peacock, and third Mr. W. Dixon.

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary*, Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary*, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary*, Mr. Brian Wynne, 8, Danes Inn, Strand, London, W.C.



Hardy Fruit Garden.

Summer Pruning.—The majority of restricted fruit trees, either on walls or in the open, comprising cordon, horizontally trained, espaliers, bush, and pyramid forms, may be dealt with now. The summer growths have extended to their full length in most cases, hence there will not be so much probability of secondary growth occurring, which, however, is no detriment, unless the summer pruning is carried out so closely as to cause the basal buds to start into growth. These are mainly depended upon to furnish the fruit buds the next season, therefore it is very important that they be kept dormant in so far as making or pushing fresh growth is concerned. They require now to be actively engaged in receiving nutriment and storing it up in the buds. This is best effected by the process of summer pruning as regards all restricted trees, those for instance confined to a definite number of main branches which are furnished with spur growths, from which emanate yearly both fruit and wood growth. The annual vigour of the trees causes the wood growths to extend unduly, whereby, if allowed to continue, is a waste of force, because the parts which extend beyond a few buds at the base must in these forms of trees be eventually cut away at the winter pruning. By practising summer pruning this is avoided, and the force, instead of being wasted, is concentrated or distributed over a lesser number. Nutrient matter is thus stored in the basal buds, which thus assume a fruitful character.

How to Summer Prune.—Freer growth is usually allowed stone fruits than Apples and Pears. In the case of Apricots the summer pruning consists of laying in a fair number of summer shoots, selecting those well placed and which can take the place of the growth now bearing fruit. The rest of the shoots must either be pruned away entirely or shortened. Apricot shoots may be pruned to three good leaves. Peaches and Nectarines are similarly treated as regards laying in growths, as they bear well on such when well ripened. Retaining a number of others, and shortening them back to form spur growths, need not, however, be practised so closely as with Apricots. A few may be retained. In the case of Plums and Cherries, the shortening process to form spur growths may be more freely practised, pruning to three good leaves, though it is often desirable to fill up a vacant space by filling it with a young growth, not doing so, however, to crowd or injure any part. Morello Cherries, which bear mainly on young shoots, should be treated like Peaches and Nectarines. On all restricted trees of Apples and Pears, the foreright or side shoots emanating from the spurs situated on the principal branches ought now to be shortened back to four or six leaves. Wall or fence trained Gooseberries and Currants also require the side growths pruning back, usually leaving growths of a length to include three pairs of leaves. Bush Red and White Currants in the open are managed in the same way, Gooseberries usually being allowed more freedom. Black Currants seldom need summer pruning except to remove a few old or crowded branches.

In the case of standard and half-standard trees of all kinds, free growing or open bush forms, the object must always be to prevent crowding. To effect this end, therefore, the removal of growths which cause this may be carried out now. Gross and sappy growths proceeding from the main stems, and tending to choke the centres, must all be cleanly removed close to the stems from which they spring. Suckers, too, from the base of Plum trees are often so prominent now that their removal can be readily effected. Cut them off as near the roots as possible. Roughly chopping them off produces a further troublesome crop.

Outdoor Vines.—The growths on walls must not be crowded. Laterals must be shortened back to two or three joints beyond the bunches of fruit. Complete the thinning of the berries, reducing the number of bunches to one on a spur growth. If more than one shoot is allowed to be produced from the spurs one only should produce fruit. Old and exhausted branches with similar spurs may eventually be replaced with younger wood. Growths for this purpose may be selected now and trained thinly from as near the base as possible. Good strong growths are the best. When they have extended to the length of 4 feet stop them at that point. They will afterwards break into fresh growth and extend further in the course of the season, but the stopping serves to plump up the growths and buds, and the canes may be pruned to 4 feet at the winter pruning. Vines on walls will be much benefited by syringing the growths in warm weather previous to the Grapes colouring, and the roots must be adequately supplied with moisture, also giving liquid manure to assist Vines carrying a good crop.

Strawberries.—Thin out all weak and useless runners, retaining the best for layering. The plantlets will root freely now into moist soil, holding them in position with a stone or peg them down. In dry weather water every day. As soon as rooting commences detach the

wires. Ground should be prepared for planting out rooting stock shortly. Deep trenching and free manuring ought to be the rule, and the sooner the soil can be prepared the better, so that it may become somewhat firm, ready for planting.

Fruit Forcing.

Peaches and Nectarines.—*Early Forced Trees.*—Where trees are grown in pots of the very early varieties, such as Alexander or Waterloo, Early Beatrice, and Early Louise, with, to succeed them, Hale's Early, Dr. Hogg, and Stirling Castle Peaches; Cardinal, Advance, Early Rivers, and Lord Napier Nectarines, they may be placed outdoors as soon as the wood has become firm, assigning them a sheltered sunny situation, keeping daily syringed and supplied with water. The trees will not then be nearly so liable to over-maturity of wood and buds, a common cause of bud dropping, and buds will form on the laterals, which usually set the fruit freely.

Planted-out trees started at or before the new year have been cleared of fruit, and the wood on which it was borne removed. This, and the taking out of any superfluous shoots, admits air and light, so that the wood retained becomes brown and hard, and the buds attain perfect formation, but this is contingent upon clean foliage and proper supplies of nourishment. The trees, therefore, must be syringed, and, if necessary, have an approved insecticide promptly applied, supplying water, and in the case of weakly trees liquid manure, to the roots, so as to keep the soil healthfully moist. Mulching with light, rather lumpy manure about an inch thick will keep the surface moist, the roots active, prevent the soil cracking, and assist in the retention of the foliage in good condition. The buds will be sufficiently advanced, and the wood matured, to allow the roof-lights to be removed, and this should not be further delayed. This secures a sort of rest, has a most beneficial effect on the trees, while the soil becomes well moistened by the autumn rains, and the trees in consequence reinvigorated.

Succession Houses.—The grand varieties Dymond, Royal George, Grosse Mignonne, Noblesse, Bellegarde, and Goshawk Peaches; Lord Napier, Stanwick Elruge, Dryden, Humboldt, and Pineapple Nectarines, are now ripening on trees started in February, and leave very little to be desired in size, colour, and quality. As the fruit is cleared off the trees cut out the wood that has borne it, thinning the growths where they are so close that the foliage cannot have exposure to light and air. Cleanse the growth, by means of the syringe or engine with water, of dust or red spider or other insect pests, using an insecticide if necessary. Keep the borders moist, not soddened, affording liquid manure if the trees are weak, have borne heavily, and the buds are not forming and plumping well, but keep it from trees inclined to over-luxuriance. Stop all laterals to one joint, but where the buds are in an advanced condition allow a little lateral extension, which prevents the premature ripening of the foliage, by continuing the root action with, at the same time, growth on which to expend it without danger of starting the principal buds. When the buds are well formed, the fruit having been cleared off the trees, remove the roof-lights. If under fixed roofs ventilate to the fullest possible extent.

Trees Swelling their Crops.—In the houses started in March the fruits have stoned and are taking the last swelling. Draw the leaves aside and raise the fruit by means of laths, with its apex to the light. Water the inside border and outside if inclined to dryness, affording liquid manure, or a dressing of fertiliser washed in, and a mulch of lumpy manure. Avoid a close surface, for it excludes air, and that it be open is essential for the assimilation of food for taking up by the roots, as its elaboration by healthy foliage. Ventilate early, in fact leave a little air on all night, syringing by 7 A.M., and through the early part of the day ventilate freely. When the sun loses power in the afternoon reduce the ventilation and raise the temperature to 85° or 90° about 4 P.M., with a good syringing and damping of the surfaces, but it must be done with judgment, for when water hangs for any length of time on the fruit during the last swelling it is apt to damage the skin, causing it to crack, and imparting a musty flavour; therefore have the fruit dry before night, and if the day is dull omit the morning syringing. Directly the fruit commences ripening cease syringing, but afford air moisture by damping the paths, and especially the border whenever it becomes dry, ventilating rather freely, and admit a little air throughout the night.

Late Houses.—If it is desired to accelerate the ripening, ventilate rather freely in the early part of the day and up to the early part of the afternoon, then keep the heat obtained by reducing the ventilation so as to secure 80° to 85°, and about 4 P.M. close, syringe well, and no harm will come if the temperature rises to 90° or 95°, ventilating a little at the apex about six o'clock, so as to let the pent-up moisture escape and the temperature gradually cool down. Regulate and tie down the shoots as they advance, allowing no more than is necessary for next year's fruiting, or for furnishing the trees. Let all have space for development, keeping laterals stopped to one leaf, and retain growths to attract the sap to the fruit. Any gross shoots pushing laterals from the leaf buds may be cut back to where the buds remain intact, or, if likely to disarrange the equilibrium of the trees, cut them out altogether. They only tend to promote gumming, imperfect setting, and casting of the fruit in stoning. Draw the leaves aside from the fruits, which raise from the under side of the trellis and expose to the sun. If the fruit

is required retarded, ventilate freely day and night; but do not, as a rule, have recourse to shading, though a slight shade obtained by drawing herring nets over the roof-lights is beneficial than otherwise where the panes of glass are large. Observe the conditions laid down in the preceding paragraph after the fruit commences ripening, also as to assisting the swelling.

Wall Cases.—Secure the growths to the trellis as they advance, being careful to allow space in the trees for the swelling of the shoots; neglect of this is a precursor of gumming. Keep the growths thin to allow of the foliage having full exposure to light, and for development. Syringe about 7 A.M., the house having a little ventilation constantly, increasing this with the advancing temperature to 75°; or if it is desired to accelerate the ripening, maintain a temperature of 80° to 85° during the day, but always with ventilation, and close sufficiently early to maintain that temperature, but not raise it above 90°. Syringe again about 5 P.M. Red spider will not make much headway provided the syringing is thorough, and the trees are well supplied with water at the roots. Afford liquid manure to weak and heavily cropped trees. Thin finally directly the fruit is stoned. Neglect of early thinning results in thin-fleshed, flavourless fruits, and they sometimes ripen prematurely.

Magpie Moth.

DURING the evenings of this month and August the Magpie moth is very commonly found. It is the *Abraxas grossulariata* of some entomologists, and the *Geometra grossulariata* of others. It usually measures about 1½ inch across the expanded fore-wings, which are very slightly yellowish-white, variously spotted with black, more or less like



THE MAGPIE MOTH.

those in our drawing, for the marks are never uniform; and there is a band of pale orange across each of the fore-wings. The hind-wings are of the same colours, but without any orange colouring. The body is orange, spotted with black. The female deposits her eggs upon the leaf of a Gooseberry or Currant tree, and from these little looping cater-

pillars come forth in September, and, surviving the winter, begin to feed again upon the leaves as soon as these open in the spring. They are full grown towards the end of May, and enter the chrysalis state between that time and the end of June. In this state they remain for about three weeks, and then the perfect moth comes forth. The caterpillar is yellowish white, with an orange stripe, more or less complete, on each side, and with numerous black spots, largest on the back. The chrysalis is black, with orange circles round the pointed end. The caterpillar prefers the leaves of the Gooseberry and Red Currant, but, after stripping these to their very stalks, it will feed upon those of the Sloe, Peach, and Almond. Hand-picking, dusting with the powder of white Hellebore, and burning the leaves early in autumn, are the best remedies and prevention against this marauder.

Obituary.

Mrs. Adolphus H. Kent.

This lady, the wife of Mr. A. H. Kent of Messrs. James Veitch and Sons, Ltd., died at her home in Fulham a few days ago after a prolonged period of illness. She was much younger than her husband.

Miss Eleanor Ormerod, LL.D., V.M.H., &c.

THE illness of Miss Eleanor Ormerod, to which we have repeatedly referred since her retirement from her voluntary labours at the beginning of this year, culminated—and we grievously regret the fact—in death on Friday, July 19th. Miss Ormerod's life-work is equalled in value by comparatively few others; her track was undeviating, her purpose set, and her exertions persistent. Success, very full success, rewarded her endeavours, and when in time the British farmers and gardeners learn to apply the remedies, or, better still, the preventives of insect scourges, they will perhaps more fully than now rejoice in, and honour the name of Miss Ormerod. She was a great woman. She has passed from amongst us quietly and peacefully. Hers is an enviable record; it can never be obscured. We feel regret that this industrious lady had not been spared to a pleasurable eventide of life, resting contentedly and without care. Perhaps, however, having plied her strength so fully and so long, she could not have endured inactive leisure. A portrait and a brief biographical notice was furnished in our pages so recently as March 28th, 1901, at which time the late entomologist was decorated with the Victoria Medal of Honour in Horticulture by the Royal Horticultural Society.



TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Seedlings (Foreman).—They are seedling Birch.

Potomageton crispum (Pond).—Forms a small rhizomatous stock from which growths break; young plants come annually from seeds, however, and this is probably its usual method of survival.

Lycoperdon giganteum (E. W.).—A small sample of the Giant Puff-ball, named above. It is edible when sliced and fried in butter, after dipping them in the yolk of an egg. They must, however, be gathered young; when the stems are yellow they are unfit for eating.

Planting Broccoli in Old Strawberry Bed (D. G. G.).—Pare off the old Strawberry plants close to the ground along with weeds, &c., and make all clean. Then form holes deep enough to receive the roots, with a crowbar, and insert the plants 20 inches apart in rows 2 feet asunder, watering them until established with liquid manure.

Galium verum (A. S.).—The Lady's Bedstraw, whose botanical name we give, seems to favour a sandy soil, well exposed to sunshine, and drained. It and the Birdfoot Lotus, *L. corniculatus*, are both native plants, and each is recommendable for the adornment of dry banks in gardens. The Self-heal is botanically named *Prunella vulgaris*; it too, is handsome, and varieties are cultivated.

Duke of Buccleuch Grapes not Ripening (A. F. T.).—We are very sorry indeed to see such fine Grapes in the condition of those before us, and in the absence of details of culture we can only attribute their state to some rather severe check the Vines have experienced. The leaves are partly scorched, which may impede the swelling of the fruit. You should encourage the laterals, and keep the roots well supplied with water.

Arum (Alice Baker).—With this letter I am sending a box containing bloom and foliage of an Arum. In the supplement to Paxton's (1868) "Botanical Dictionary" he gives "Arum palæstinum, colour purple, introduced 1865," which I think this must be. In going into a cottage garden, on the opposite side of the road to where I am living, I was almost startled to see a group of, to me, this strange, lurid-looking plant, with several buds and one fine bloom, and several young plants in other parts of the border. The cottager told me they come up annually, and that he found them growing in the garden when he came to the cottage a year or two back. He called it the Snake Lily. Paxton gives the Palestine Arum as a greenhouse plant; this is growing under a low wall, aspect west, and protected by any amount of rubbish, and rather a damp situation. [We believe your plant to be *Dracunculus canariensis*. We replied under Names of Plants last week.—Ed.]

Names of Fruit (Cherry).—Cherries: 1, Bedford Prolific; 2, Bigarreau Frogmore; 3, Elton; 4, Kentish; 5, Governor Wood; 6, unable to recognise; 7, May Duke. (A. L. F.).—Gooseberries: 1, Peru; 2, Pretty Boy; 3, Progress; 4, Succeed; 5, Lofty.

Names of Plants (M. L. G.).—1, *Tilia vulgaris* (syn. *europæa*), Common Lime; 2, *T. platyphylla* var. *aurantia*; 3, *T. heterophylla*. We have an able article on Limes in hand, which will appear soon. (H. J. J.).—*Cupressus funebris* var. *glauca*. (A. R.).—1, *Lolium perenne*; 2, *Lagurus ovata*; 3, *Stipa pennata*. (A. L.).—Send Sweet Peas to Mr. Henry Eckford, Wem, Salop, or any large grower of them. (P. P.).—1, *Aster laevis*, one of the early flowering species; 2, *Liatris macrostachys*; 3, *Brachycome iberidifolia*; 4, *Centaurea macrocephala*; 5, *Centaurea scabiosa Oliveriana*; 6, *Centaurea atropurpurea*. (A. L.).—*Sequoia sempervirens*, the Redwood of California; the Yellow-wood is *Cladrastis tinctoria*. (A. B.).—1, *Rudbeckia digitata*; 2, *Heliopsis scabra pulcherrima*; 3, *Zinnia pauciflora*. Yes, a very showy Mexican annual. (Arthur Wade).—1, *Arctium majus*; 2, *Coreopsis lanceolata*; 3, *Achillea Ptarmica* fl.-pl.; 4, *Helipterum roseum*; 5, *Ammobium alatum*; 6, *Catananche cærulea*; 7, *Lysimachia punctata*; 8, *Lysimachia vulgaris*; 9, *Lysimachia clethroides*. (J. N.).—1, *Nepeta Glechoma variegata*, a variety of the Ground Ivy; 2, *Funkia lancifolia albo-variegata*; 3, *Arundinaria Fortunei variegata*; 4, probably *Sparmannia africana*, send when in flower; 5, not recognised; 6, *Allamanda Schottii*; 7, *Euphorbia (Poinsettia) pulcherrima*; 8, *Justicia carnea*.

Covent Garden Market.—July 24th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apricots, 20s., 24s. ... box	1 0	to 1 3	Grapes, Muscat	2 0	to 3 0
" ½ sieve	4 0	6 0	Lemons, Naples, case ...	24 0	30 0
Bananas	8 0	12 0	Melons, each	1 0	2 0
Figs, green, doz.	2 0	4 0	Pines, St. Michael's, each	4 6	6 0
Grapes, Hamburgh, lb. ...	1 0	2 0	Strawberries, lb.	0 4	1 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2 0	to 3 0	Horseradish, bnch.	1 2	to 1 6
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1½	0 2
Batavia, doz.	2 0	0 0	Lettuce, doz.	0 6	1 0
Beans, French, lb.	0 4	0 9	Mushrooms, forced, lb. ...	0 8	0 9
Beet, red, doz.	0 6	0 0	Mustard and Cress, pnnt.	0 2	0 0
Broccoli, bush.	0 0	0 0	Parsley, doz. bnchs. ...	2 0	3 0
Cabbages, tally	1 6	3 0	Peas, bus.	2 0	4 0
Carrots, new, doz. bnch. ...	3 0	4 0	Potatoes, new English, ct.	8 0	10 0
Cauliflowers, doz.	2 0	0 0	Radishes, doz.	0 6	0 9
Chicory, Belgian, lb.	0 4	0 0	Rhubarb, doz.	0 0	0 3
Corn Salad, strike	1 0	1 3	Shallots, lb.	0 4	0 0
Cucumbers, doz.	2 0	3 0	Spinach, bush.	4 0	5 0
Endive, doz.	1 3	2 0	Tomatoes, English, lb. ...	0 3	0 4
Greens, bush.	1 0	1 6	Turnips, doz., new	6 0	8 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Acers, doz.	12 0	to 24 0	Geraniums, scarlet, doz.	2 0	to 4 0
Aralias, doz.	5 0	12 0	" pink, doz.	2 0	4 0
Araucaria, doz.	21 0	30 0	" King of Denmark, doz.	3 0	4 0
Aspidistra, doz.	18 0	36 0	Hydrangea panicula, doz.	18 0	24 0
Crotons, doz.	18 0	30 0	Hydrangeas, white, pink	9 0	0 0
Dracæna, var., doz.	12 0	30 0	Lycopodiums, doz.	3 0	4 0
Dracæna, viridis, doz. ...	9 0	18 0	Marguerite Daisy, doz. ...	3 0	4 0
Euonymus, var., doz. ...	6 0	18 0	Mignonette, doz.	6 0	0 0
Evergreens, var., doz. ...	4 0	18 0	Myrtles, doz.	6 0	9 0
Ferns, var., doz.	4 0	18 0	Palms, in var., doz. ...	15 0	30 0
Ferns, small, 100	10 0	16 0	" specimens	21 0	63 0
Ficus elastica, doz.	9 0	12 0	Pelargoniums	6 0	8 0
Foliage plants, var., each	1 0	5 0	" Ivy leaf	4 0	6 0
Fuchsias	3 0	4 0			

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	0 0	to 3 0	Maidenhair Fern, dozen		
Asparagus, Fern, bunch	1 6	2 6	bnchs.	3 0	to 4 0
Carnations, 12 blooms ...	0 6	1 0	Marguerites, white, doz.		
Cattleyas, doz.	15 0	18 0	bunches	2 0	3 0
Cornflower, doz. bnchs. ...	1 0	0 0	" yellow, doz. bnchs.	2 0	3 0
Eucharis, doz.	3 0	4 0	Mignonette, English, doz.	2 0	3 0
Freesia, doz. bnchs.	0 0	0 0	Odontoglossums	2 0	3 0
Gardenias, doz.	1 6	2 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz.	1 0	2 0
bunches	4 0	0 0	" pink, doz.	1 0	3 0
Gladioli, doz. bnchs.	4 0	6 0	" yellow, doz. (Perles) ...	1 0	1 6
Gypsophila, doz. bnchs. ...	3 0	5 0	" red, doz.	0 6	1 0
Iceland Poppies, doz. bnchs	1 0	2 0	Smilax, bunch	3 0	5 0
Lilium lancifolium album	2 0	3 0	Stephanotis, doz.	1 0	1 6
" rubrum	3 0	5 0	Stock, white, doz. bnchs.	2 6	3 0
" longiflorum	1 6	2 0	Sweet Peas, white, doz.		
Lilac, white, bunch,	3 0	0 0	bunches	2 0	4 0
Lily of the Valley, 12 bnchs	12 0	18 0	" coloured, doz. bnchs.	2 0	0 0
			Tuberose, gross	3 0	0 0

Next Week's Events.

Tuesday, July 30th.—Buckingham Exhibition; R.H.S. Committees.
Wednesday, July 31st.—Midland Carnation and Picotee Society Show at Birmingham (two days); Wilts Exhibition.
Thursday, August 1st.—Isle of Wight Horticultural Association Exhibition.

Phenological Observations.

JULY 26TH TO AUGUST 1ST.

PLANTS DEDICATED TO EACH DAY.

26 Fri. Grayling butterfly seen.	Wild Chamomile.
27 Sat. Blackcap ceases song.	Purple Loosestrife.
28 Sun. Admiral butterfly seen.	Mountain Groundsel.
29 Mon. Common grasshopper chirps unceasingly.	Red Chironia.
30 Tu. Rye cut and harvested.	White Mullein.
31 Wed. Hoary Ragwort flowers.	Great Mullein.
1 Thr. Swallows' second brood fledged.	Stramonium.

Trade Catalogues Received.

Cooper, Taber, & Co., Ltd., Witham, Essex.—*Wholesale Bulb Catalogue*.
Ant. Roozen & Sons, Overveen, near Haarlem, Holland (agents, Mertens and Co., 3, Cross Lane, St. Mary-at-Hill, London, E.C.).—*Catalogue of Dutch and Cape Bulbs, Autumn, 1901*.



The Diamond-back Moth, *Plutella cruciferarum*.

WE are always in difficulties of some sort—either the weather is too hot or too dry, too cold or too wet. We never, or rarely, seem to get a happy medium, and to farm well and successfully we need to have resources within ourselves ready to fall back upon to meet every contingency. Do as we will, and strive as we may, there are times and seasons that quite overmaster us; there are circumstances that we cannot control, and alien forces against which we cannot stand.

The earliest insect foe we have to face is wireworm; but there are certain remedies which, if applied in time, will stop the worst of the ravages. Then as stock goes out to pasture, we have for the bullock and cow the warble fly, for the sheep the tiresome maggot, or mawk, as it is called in some parts; the horse has the bot fly, and poultry parasites innumerable.

Then we turn our attention to the Turnip crop. Some years all goes well—the soil is in capital condition, the weather everything one could desire, and the young plants get quite away without let or hindrance. Happy the case when it is so, for at the best of times roots are an expensive crop, and some great and learned authorities are doubtful if even a bumper crop pays for production. That is too great a question to go into; suffice it to say we should feel sadly lost without our roots, and should not know where to turn for their equivalent. Of course, on strong land none but the most sanguine of men will attempt their growth; everything militates against successful culture, and the expense and disappointment are tremendous. So far, this summer has been (taking the country generally) an unfortunate one for root crops—land too dry to properly work, seed beds too rough, no warm showers, or very few of them, backward plants with no chance to grow because an easy prey to “fly.” Healthy vigorous plants do not seem to attract “fly,” or else their vigour enables them to outgrow their enemies and get right away. We have not heard of the Mangold weevil this year, though we have heard of acres of dormant seed, which, alas! we fear will germinate only too late to be of substantial value.

We began to think we were fairly out of our Turnip difficulties, at least for the present, when, lo, the note of alarm is sounded again, and this time the cry is, “The diamond-back is upon us.” This is by no means the first visitation, for we find there were invasions of this enemy in 1837, 1851, 1883, 1888, and also in 1891. The one in 1891 we remember well, as the ravages were greatest in the eastern counties from Kent to Aberdeen. It is a funny circumstance, but nevertheless true, that a calamity which affects the crops or stock of others is soon forgotten by the more fortunate; it is only when the trouble comes home that the circumstances are indelibly fixed on the memory. 1891 was with us a dry hot season, and we have lively recollection of the riddled leaves, and the flight of hosts of moths. About the middle of July it usually makes its appearance, and in case there may be novices who do not know it by sight, we will try and describe its appearance. It is from five lines to half an inch long when resting with folded wings. The wings, when expanded, have a breadth of nearly two-thirds of an inch. The colour is light brown shaded with grey, and the diamond marks are plainly visible upon the back when the insect is at rest. These marks are formed by the arrangement of the light coloured edges or margins of the wings. The peculiar tilt of the wings at their ends forms a kind of tuft. The under surface of the body is grey, or pale grey. The first brood of moths comes early from the chrysalids which have withstood the winter, and then the female moth proceeds to lay her eggs on the under side of wild cruciferous plants and such cultivated ones as may be then growing. There is no doubt about it, that in a favourable season there may be two, if not more, broods. Food is most abundant, for they will live upon all kinds of Turnips, Cabbage, Broccoli, Brussels Sprouts, Kale, Rape, Mustard, wild Mustard, Radishes, Horseradish, Stocks, Wallflowers, and no end of other things.

Now what is to be done to get rid of the pest? Remember they are found on the under side of the leaf they attack. It is all very well to recommend a dressing of soot and lime; one part lime to three parts soot and sulphur, 1 bushel soot to 2 or 3 lbs. sulphur, distributed at the rate of 3 or 4 bushels per acre, are nice mixtures, but the question

is whether the distributor does not get a greater benefit than the moth or caterpillar. It is well nigh impossible to get at the evil so. A spray of carbolic acid and paraffin, quassia and softsoap, would do if you could insure a thorough washing. One chemist advises Paris green, 8 ozs. to 100 gallons of water. This is a horribly poisonous mixture, and should be used with the greatest care. There is a better way still, recommended. Tie branches of Broom, Birch, or any similar plant, to any ordinary drill hoe (scruffler), so that when hoeing the branches may brush the Turnip leaves and knock off the caterpillars; follow at once with a second hoe or a light drill plough. If the Turnips at the time of the attack have not been singled, leave them alone and give a little stimulating manure, and do not worry, is the advice of a practical neighbour.

It was noticed in 1891 that various kinds of birds were effective enemies of the caterpillars of this moth. Rooks, starlings, peewits, golden plover, and seagulls did good work. We feel sure if the black-headed gull has not left its inland breeding place for the sea it would do its share; but with us the gull is generally away and clear of us by middle of July. Small birds, too, where any are left, are caterpillar enemies; it is a pity they are not more discriminating. We have Turnip fields all round, but they appear infinitely to prefer a field of immature Barley, where they are not at all wanted. Of course, what would save the Turnips would be heavy and continuous rain; rain that would wash off the caterpillar and give the plants a new lease of life, and in this fickle climate of ours rain may come at any moment.

There is another little matter we think worthy of attention. Some years ago there was much talk of a forage plant called *Lotus corniculatus*, in appearance not unlike Lady's Finger. The value of this plant consisted in its power of thriving on hot sandy soils in dry weather. We believe it was first grown in Norfolk. At the time we speak of we were farming some sandy, blow-away land, and we tried *Lotus corniculatus* in our seed mixture. It proved a very valuable addition to the pasture, and certainly thrived as no other growth would, under most unfavourable conditions. We ought to say this pasture was laid down for three years, as it was practically of very little value for anything else. As long as the plant was small and well eaten down it was frost proof; but should it attain any size, and severe weather set in, it is in danger of being cut down.

Now, of course, we may be nearing the end of the drought cycle, or we may be approaching severe winters again; certainly for the last two or three there have been no frosts that would materially injure any vegetation. Of course our readers may have tried *Lotus* and found it wanting in the qualities they desire. But at any rate, we think an owner of hot, dry land might do worse than sow *Lotus corniculatus*.

Work on the Home Farm.

“The corn fields are whitening to the harvest,” and that busy period seems likely to be here before we are ready for it. Swedes are not all hoed yet, white Turnips have hardly been touched (only the earliest ones), then all have to be run over again for weeds and doubles, so there is much to be done. Some piece workmen were observed this morning going to work an hour earlier than usual. That is the way to get work done, but the men will not make long days now as readily as they once did. Of the party we saw none would be under fifty years of age. The new generation would not do such a thing, as to go to work at 5.30 A.M.

There is talk of harvest in a fortnight. All we can say is that the grain will not be properly filled in that time. We want a good twenty-four hours' rain for everything. Barley and Oats are beginning to suffer much; Turnips and Swedes, though not in dire necessity, would be much benefited, whilst midseason Potatoes are giving up and will be a very light crop. Late varieties have not felt the drought so much, but need a good rain at once to keep them going forward. A fortnight of hot sun and drying winds has indeed made a transformation.

Peas for pulling green have shrivelled up instead of filling properly. All kinds are ready at once for a glutted market. We see an army of women pulling Peas as we write. Will the market return compensate for the labour?

Good progress has been made with the hay, much has been got in perfect condition and little remains out. The stacks are not large, being about equal to last year's, but the quality is very good, and there will be no waste. Wise farmers will get their hay thatched at once, for the heat is sure to be followed by thunderstorms, which may spoil a good portion of the roofing if not protected.

We hear of local appearances of the diamond-backed moth, but have not observed it personally. May its ravages be only local, for we have a vividly unpleasant remembrance of its visit in 1891.

Clover stubbles and meadows look very bare and brown now the hay is removed, and they will need a good soaking, or there will be little aftermath for the lambs.

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Journal of Horticulture.

THURSDAY, AUGUST 1, 1901.

The Old and the New.

DURING the present century upon which we have so recently entered, there will, doubtless, be wonderful advances made in the extension of human knowledge, and in our methods of applying that knowledge with the object of solving some of the greatest problems of the day. Under the influence of discoveries continually made, life becomes more tolerable in some respects, its burdens less heavy to many, while others are overwhelmed with the keenness of modern competition. It seems, indeed, that the pleasures and struggles of life to-day do not differ so much from those of centuries ago as our admiration for modernity sometimes leads us to think. As civilisation advances, life becomes more complex, and our wants are increased a hundredfold, so that, although we appear to live under more favourable conditions, it is by no means certain that the average individual gets more enjoyment out of life; rather perhaps is it that we strive to attain a certain object which we think will be to our advantage, while we neglect to enjoy hosts of simple pleasures around us.

To all engaged in gardening pursuits, whether for pleasure or profit, the thought must, I think, often arise how unlimited is the enjoyment to be obtained in the pursuit of our ancient art. The gardening instinct reigns to some extent in every human breast, and since the mighty dictum, "By the sweat of thy brow shalt thou eat bread," went forth, the toiler in gardens and fields earns his bread by labour more congenial than that which the town dweller pursues; and the result of modern life seems to show that the more we depart from ancient conditions the more numerous are the obstacles which stand between the individual and a healthy and contented existence. No wonder, then, that after the pendulum has for years been swinging in the direction of life in the towns it should show signs of moving again in the opposite direction.

So far I have jotted down a few thoughts, in

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

which I have compared old conditions of life with new ones. Let me carry my musing somewhat farther, and compare modern methods and knowledge with the results achieved in the days of yore. We have reason to be proud to-day of the achievements of science in connection with rapidity of communication by land and sea, of the wonderful labour saving appliances which inventors have given us, and of hosts of other wonders, as well as in the spread of education generally. With all such advantages, however, there are many things which the ancients could accomplish which are lost arts to-day. That wonderful process by which the ancients made copper as hard as steel, is to-day unknown, and the man who can re-discover it would soon move among the great ones of the earth. The ancients made malleable glass, which could be moulded like putty: no one can do so now, although there are uses innumerable to which it could be put. Does not this also show that, although human knowledge increases in some directions, it has diminished in others?

Let me now turn particularly to gardening and gardeners; here surely many will say, with a shout of triumph, mighty strides have been made. I admit it seems so on the surface, but let us look a little deeper. The age of cheap glass and heating by means of hot water has had the effect of multiplying glass structures to an enormous extent, and the volume of gardening under glass has therefore increased by leaps and bounds; but that is no true test of real advance, the real test lies in the answer to this question—viz, "Do we grow the majority of crops and plants in our gardens better than formerly?" I think not. The grand Grapes of thirty years ago are not surpassed by those of to-day. The Ericas of olden times, where can they be equalled to-day? and although great improvements have been made in raising new varieties of flowers, fruits, and vegetables, many old standard kinds are still unsurpassed, and few would be bold enough to affirm that we grow them better than of yore. The culture of the Pine Apple—once esteemed as the king of fruits—is not yet quite a lost art, but it certainly seems likely to become so. No; the great increase of glass structures has not led to proportionate improvement in methods of culture, but it has undoubtedly brought the products grown in them within the reach of a far larger class of consumers.

The grand old private gardens, in which gardening in every branch was splendidly carried out, are rapidly going to decay. In such gardens it was the duty of the chief to maintain a plentiful supply of flowers, fruits, and vegetables throughout the year; and in addition to keep everything trim, orderly, and attractive. To-day we have hosts of establishments in which some branches of gardening are splendidly carried out, but how few are first-rate in every department. Add to this the fact that all experienced gardeners know well how vast an amount of skill, judgment, energy, and observation is necessary to manage an all-round establishment well, compared with the ease in which a few prominent features may be well carried out; and the verdict must, I think, be that the men who accomplished the former task were giants among their fellows. The older order has indeed changed; the necessary funds to keep up such princely establishments not being forthcoming they have fallen from their high estate, and gardeners are the poorer in the matter of establishments in which they can obtain a thorough all-round knowledge of their craft.

One result of the gradual decay of our best gardens is, that at the present time there is a dearth of thoroughly trained young men who have gained sound knowledge in the various departments of a good garden, although there is a fair supply of specialists, and a still better supply of those who know more about the theory than the practice of gardening, men who know how and when a thing should be done, but who in putting such knowledge into practice cannot be considered pronounced successes. I am no pessimist, and do not believe that this state of affairs will long continue, because the great training schools for gardeners which have recently sprung up will do much toward giving young men a correct idea of the principles of horticulture, though they do not supply such sound all-round training, or so strongly impress upon the student the importance of constant endeavour as the all-round gardens of old did.

It is a fact that the men who stand very high in the calling, on paper, are by no means the most successful in practice. A man's intellect is only capable of retaining and applying a limited amount of knowledge, and if too much force is spent in pondering on theoretic problems of gardening, there is too little energy left to practise gardening unceasingly, and, while doing so, exercise that keen spirit of observation without which great cultural achievements can never be obtained. If horticulture is to still press onward, it is necessary for us to have some theocrists, who are capable of giving the result of their researches in simple form to the great body of practical workers, for I am firmly convinced that to hamper the latter with an unnecessary amount of theory is to lessen their capacity for continuous practical work. It is not necessary that a cultivator should have at his finger ends the botanical name of every plant or crop he cultivates, or the life history of every injurious insect, but it is absolutely necessary that he should, make the best possible use of the resources at command, and cause the garden under his charge to smile with beauty and plenty.—ONWARD.

Strawberries: Tried Sorts.

Now that the present season for Strawberries is quickly drawing to a close, it behoves those who wish to keep up to date, and are anxious to maintain a rotation of the best varieties, at once to commence their preparations for another season. Layers from these varieties, which have by experience been proved to suit one's requirements and the locality in which they reside, should be taken. As the majority of experienced gardeners have proved to their satisfaction, one of the great secrets of success with this important crop is early propagation, for which a reserve bed should always be planted to supply runners only. Any that are "blind" should be discarded; one is then sure of obtaining the future stock from plants of a fruitful habit. For layering, I prefer small turves cut some 3 or 4 inches square, laying a stone close up to the neck of the runner; this helps to save so much labour in watering, and, of course keeps it in position.

The quarters for their reception must always be thoroughly well prepared in the winter previous. If the soil is of a light, sandy nature, such as I have to deal with in this neighbourhood, I find nothing better than good fat manure, the ground being bastard trenched. If wood ashes are obtainable these will supply the necessary potash, though these last two seasons I have been very successful in obtaining good crops by supplying potash in the form of kainit in conjunction with basic slag and phosphate, using 4 czs. of the former, and 8 ozs. of the latter to the square yard. It must be borne in mind in the use of kainit that it is a salt containing several impurities. It is, therefore, advisable to trench the ground early in winter, in order to allow these impurities to be filtered away. My practice is to take a supernumerary crop, such as Onions, drawing the drills sufficiently wide apart to allow the runners being planted so soon as they are ready, between every other row.

I do not think the majority of gardeners have fully realised the splendid properties of basic slag for fruit culture. It is not a complete manure, its chief constituents being lime and phosphoric acid. This must also be used in early winter to allow its full benefits being obtained the succeeding season. Early in the spring it is commendable to follow with a surface dressing of superphosphate and lime, using four ounces to the square yard, while to finish the swelling crop I use one ounce per yard of nitrate of soda.

Now as regards varieties. I grow what I find answers my requirements. First in order of ripening comes the old Vicomtesse Hericart de Thury, and though it is rather small, yet it is of good quality and colour. A few early dishes are taken, and the remainder come in for preserving. Royal Sovereign follows rather closely, and still maintains its reputation, though I must admit it likes a heavier soil than mine. Sir Joseph Paxton is still hard to beat, and for colour, shape, and flavour, worthily holds its own. Now comes Competitor, of which, more than for its heavy cropping capabilities, the less said the better. But do not discard it, for in a severe drought it is a sure and heavy cropper. Then we have Laxton's Commander, a beautifully flavoured fruit, which travels well, is a fair cropper, and will succeed where British Queen fails.

Now I come to my favourite, and that is Laxton's Latest of All, though the name is not justified, it being more of a midseason variety; but in order to obtain the best results it should be grown on a north border. Layer the runners as early as possible, and plant them early. Crop it the first season, whence fine fruit will be produced. Let the plants remain a second year and it will be seen at its best; after then it is not worth keeping. Under this treatment it gives excellent results, and is a variety which should be included in every collection. Frogmore Late Pine I treat in a similar manner, also Loxford Hall Seedling. The former is a fair cropper, and possesses excellent flavour; the latter is also good, but not a heavy cropper.

Of the newer varieties I have this season given a trial to Laxton's Fillbasket. It seems likely to prove itself entitled to its name, as it is an enormous cropper; colour bright scarlet; flesh firm, therefore a good traveller, and a midseason variety. [We can endorse Mr. Hagon's remarks.—ED.] I shall try it for forcing next season. Trafalgar, sent out by the same firm, will also prove itself to be an acquisition as a late variety. From its parentage it ought to succeed best if given the same treatment, and on a north border. Of the perpetual bearing varieties I grow St. Joseph. I cannot say much for its flavour as a dessert kind, but for fruit salads, compôte, &c., it ought to be grown, and should be included in every collection, if only for that purpose.—GEO. HAGON, *Fowley, Hants.*

[We would heartily recommend our correspondent and all Strawberry growers to secure The Laxton. We have given our opinion of it already, and are thoroughly confident that in it, gardeners will find the variety of the future. We should be pleased to have short notes from other correspondents on their opinion of varieties, and how they have behaved this year.—ED.]



Phalænopsis Manni.

Mr. H. R. Richards interestingly referred to this bright and pretty species on page 73 of last week's issue, and the accompanying illustration bears out his remarks as made. Growers lacking this species might be induced to give it a trial.

now be well watered and kept in a strong moist heat, with their heads well up to the light.

Odontoglossums are rather erratic in their habits of growth, and some plants are sure to be more forward than others. When it is evident that the young shoots are sufficiently forward—i.e., when roots are about to be produced, they may be given new material, but nothing like a general potting must take place before the end of August or September. Any plants that are repotted should be stood by themselves in the coolest and moistest part of the house, and given heavy shading until they recover. Although the roots need keeping a little drier after repotting, water must be more frequently applied, the apparent paradox being explained by the fact that the new compost dries far more rapidly than the old.

Few people nowadays grow the beautiful large growing Vandas,



PHALÆNOPSIS MANNI.

The Week's Cultural Notes.

In the warm house *Calanthes* will now be growing very freely, and the pseudo-bulbs will be forming. Now, if ever, is the time when feeding at the roots with liquid manure should be practised; but it is easy to overdo this kind of thing with Orchids, and I have yet to learn that a large plethoric bulb produces finer flowers, or more of them, than a medium sized well-developed one. Only when the plants are growing in small pots or a poor soil should they need feeding, and the manure water used should be weak, and at the same temperature as that of the house. *Catasetums*, *Cynoches*, and *Mormodes* should

Aërides, and others of a like habit that used to be so popular. Those who do should be careful not to keep them too hot at this season, and to see that the temperature is well balanced by air and moisture. They like roomy quarters, and are seldom satisfactory in small houses with their heads against the glass. *Vanda suavis*, *V. tricolor*, and its varieties are quite comfortable now in the *Cattleya* house, and the atmosphere here is quite congenial to them.

The weather of the last few days shows how necessary it is to always have the fires laid ready even in summer. A drop of over 20° in the outside temperature in about as many hours is bound to be felt by such sensitive subjects as Orchids, and unless a little warmth is at

command, the night temperature will read far too low for the tropical kinds. For the *Odontoglossums* and *Masdevallias* nothing, of course, could be better, as the houses may be left open day and night, the plants revelling in the cool moist air. The least warmth in the pipes is sufficient in any case, just enough to keep the air moving and prevent stagnation, the latter condition being most favourable to the propagation of the dreaded spot and other fungoid troubles.

Odontoglossum deltoglossum.

The blossoms of this species are very distinct, pretty and bright in colour, and very freely produced. In habit it is like *O. gloriosum*, but the flowers are quite distinct. They occur on branching spikes, and are bright yellow in ground colour with large blotches of reddish brown. It delights in a cool, shady, and moist atmosphere all the year round, and the more light and air it has the better, provided the sun's rays are not directly on the plants. The house in which these plants grow should always feel pleasantly cool on entering from the external air in summer; unless it is so they will not long be satisfactory.

Oncidium Cræsus.

Orchids that flower in late summer are always acceptable, and this pretty species is especially welcome owing to its distinctness. The flowers are yellow blotched with brown on the sepals and petals, and in the centre of the lip there is a deep blackish purple area that is very telling and showy. Not being a very strong grower large pots are unnecessary for it, but the plants do very well in the small suspending pans now so much used for Orchids. The best compost for it is three parts of clean sphagnum moss to one of peat. A few small crocks may be mixed with it, and the drainage should fill about two-thirds of the depth of the pan.

Epidendrum (Nanodes) Medusæ.

This is a most wonderful species, the blossoms being among the most singular and weird looking in the whole Orchid family. They are greenish yellow in colour, with a purple suffusion on the sepals and petals, while the lip is deep maroon purple bearing a deep fringe formed by the cutting up of the lip into fine filaments. A plant noted during the week was carrying six flowering shoots with an aggregate of fourteen flowers, and in this form it is very attractive. Being a native of Ecuador, quite cool treatment suits it best.—H. R. R.

Cucumbers.

For a supply of fruit during the winter seed should now be sown. There are many varieties, but none surpass Telegraph, Rochford's Market, Cardiff Castle, and Syon House strains in selected stocks. The plants from a sowing made early in August will be fit to plant out at the beginning of September, and in a light, well-heated structure will commence bearing early in winter, and yield a supply up to spring. It is necessary that the house be thoroughly cleansed, and the soil free from eelworm. For cleansing the house, especially where there has been fungoid disease, a preparation of iron sulphate may be used with great advantage. It should be used in solution, 1 part sulphate of iron to 20 parts water, with 1 part in 450 parts of sulphuric acid, or water 50 gallons, sulphuric acid 1 pint, iron sulphate 25 lbs. Prepare the solution in a wooden tub or barrel, as the sulphuric acid acts injuriously upon a metal vessel. Place in the iron sulphate, and pour upon it the sulphuric acid, then add by degrees the 50 gallons of water. After the old soil has been removed, and the remains of a previous crop cleared away, the walls and other parts of the house should be drenched with the solution. This destroys spores, resting or otherwise, with which it comes in contact in crevices of woodwork or brickwork, or on the ground or floor of the house. The treatment must precede re-occupation of the house some time, otherwise the foliage of the Cucumber plants would be injured, if not completely destroyed. The solution also acts well against animal pests, from eelworms up to red spider and thrips.

Eelworms, however, may be, and usually are, as regards root-stem eelworm, *Tylenchus obtusus*, and stem eelworm, *T. devastatrix*, introduced in the soil. They are associated with native vegetation, and almost inseparable from the roots of plants passing from a living into a decayed state. Heating the turf to a temperature of 212° certainly destroys present eelworms, as they succumb to heat over 125°. Baking the soil, or even steaming it, at high temperatures, practically renders turf sterile, so that the heating, if practised, must not be excessive. Watering the soil a short time in advance of planting with Little's soluble phenyle or Jeyes' fluid, one ounce to a gallon of water, is generally effective. The treatment should be given at least a week in advance of sowing or planting. In the case of manure it should be naturally heated, the short, fresh material being thrown into a heap, and when heated so that the hand cannot be borne on it for a short time, turn outside to inside, top to bottom, and let it heat again. If then spread out so as to prevent further heating it will have lost very little manurial value, and may be regarded as practically free from eelworms or similar animal pests, therefore suitable for mixing with loam for growing Cucumbers.—GROWER.

Currant Aphides.

DURING the present season considerable damage has been, and is still being, done to Currants by aphides or plant lice. In some districts the bushes are quite ruined, the leaves turning brown and shrivelled up, and the fruit falling off, the bunches "shanking" in consequence of the abnormal presence of these pests. The rapid increase of the "plant lice" is due to the recent long spell of dry, warm weather, so favourable to the development of these insects, so detrimental to the development of the fruit and health of the bushes. Aphides are usually more or less prevalent on the Currants, and are always liable under certain climatic conditions, such as existed during the past June, to increase to an injurious extent.

Currant bushes should therefore be washed early in the year just as regularly as Apple, Plum, and Pear trees. Four species of aphides, or dolphins, occur on the three kinds of Currants, two more or less confined to the Currant and other *Ribes*—namely, the Currant blister aphid (*Rhopalosiphum ribis* of Linnæus, and *Myzus ribis* of Linnæus); the third species found is the Cherry aphid (*Myzus cerasi*, *Fabricius*), a fourth species is at present unidentified. The two true *Ribes* species work in a slightly different way. One, *R. ribis*, produces reddish, reddish-brown, or yellow blister-like galls on the surface of the leaves, whilst *Myzus ribis* often causes the leaves to curl up, especially on the top shoots. Both species are equally difficult to destroy after they commence to breed in numbers, owing to their being hidden, and more or less protected in the hollows of the blisters and under the curled-up leaves. The galled patches are chiefly noticed on the upper surface of the leaf, where they are blister-like; below they are concave. In this cavity the aphides live and breed, increasing the area of the diseased patch as they develop. Numerous blisters may be formed on one leaf, varying in size from one-fourth to nearly an inch in length. Occasionally a moss-like growth may be seen inside and outside these galls. The leaves so attacked shrivel away, but the fruit often falls owing to loss of sap long before the leaves die. Neither of these aphides are said to form much "honeydew," hence the diseased appearance of the leaf is often not noticed as being of insect origin during the early stages of the attack unless an examination has been made of the under surface. The fruit has been particularly noticed to "run off" before the leaves die away, on poor soil or where the drainage is bad, or on so-called "pinnocky" spots on the green-sand soil of Kent. Later "honeydew" becomes abundant, being especially formed by the leaf-curling species; on Black Currants the "honeydew" often gives a shiny and sticky appearance to the whole bush.

Myzus ribis is especially found on the Black Currant, but also on the Red and White, and sometimes on the Gooseberry. *Rhopalosiphum ribis* is more often found on the Red Currant than the former species, but is also abundant on the Black and White.

The insects spread chiefly by means of winged generations, which appear every now and then, flying from bush to bush, and there setting up fresh areas of disease. These winged generations may occur as early as the middle of May, but usually not until June. These two insects seem to have been treated as one; the late Miss Ormerod merely called them *Aphis ribis*, but the two are perfectly distinct. *Myzus ribis* occurs abundantly on the Continent; Kaltenbach speaks of it as destructive in Germany, and Taschenberg also refers to it as forming lumps and curling up the leaves. It appears to have been imported into America, for Saunders mentions it as an imported insect. Lintner also says it is destructive in the States.

Life History.

The appearance and habits of the two commonest Currant aphides are different, but their life history is very similar.

(I.) *Rhopalosiphum ribis*, L.—The wingless viviparous female, or "mother queen," is shiny green, mottled with darker green; legs, cornicles, and antennæ pale green; eyes red. In form it is oval and convex, and larger than the following species (II.), the body being one-tenth of an inch long. The wingless females are found under the leaves and cause the red, orange, and yellow blisters. They appear first of all in April, and occur continuously until July and even August. Every now and then the lice to which they give rise turn into pupæ, rudiments of wings appearing as wing buds.

The pupa is green, and does not differ much from the wingless female or larvæ. The winged viviparous female, which arises from the pupa, is yellowish green with black head, antennæ, joints to the legs, black thorax with a yellow band in front; the abdomen is bright yellowish green, with dark spots and patches on the dorsum and sides; yellow honey-tubes, swollen towards the apex; ochreous legs with dark joints. These winged females fly from bush to bush. In the autumn or late summer males and ovigerous females are formed; the egg-laying female, after being fertilised, depositing her few brown elongated eggs on the last year's growth of a twig just under the broken rind or upon it. Here the eggs remain all the winter. A

number of the winged females seem to leave the bushes at the end of July, but some always remain. This aphid, besides feeding on the Red, Black, and White Currant, also attacks the Gooseberry, and it has been found in the Guelder Rose (*Viburnum opulus*), the Nipple Wort (*Lapsana vulgaris*), and the Sow Thistle (*Sonchus*).

(II.) *Myzus ribis*, Linn.—This plant-louse can easily be told from the former by its olive, not black, head, and its black cornicles and irregularly black ornamented abdomen in the winged female. It occurs from April to August, especially in the Black Currant and Gooseberry, but also on the Red Currant; it is said to cause blisters similar to (I.). It often causes the leaves at the apex of the shoots to curl and twist up. It is apparently the *Rhopalosiphum ribis* of Koch. The apterous or wingless female, which appears in the spring, is shiny yellowish green, with dark green mottlings, elongated oval in form, and with curious capitate hairs in front; the cornicles and legs are pale green, and the eyes reddish. The lice or larvæ are pale green. When the leaves lose their sap they turn to pupæ, and then to winged females. The pupa of this species is shiny yellowish green, with two horny spots on the occiput. The winged viviparous female is bright green, with pale olive head, brown thorax with an olive band across the prothorax, irregular transverse bands and spots on the abdomen, and four or five dark lateral spots; the deep olive green to black cornicles are cylindrical in form, and the deep green legs have olive tarsi. The eyes are again red in colour in the larvæ.

Towards July many leave the Currants, but as in the former species some always remain, and give rise to viviparous females and males, the former depositing their long brown eggs under the exfoliated rind, attaching them to it by a gummy excretion; here they remain until the spring, when they give rise to larvæ, which soon grow into the "mother queens." The wingless female is smaller than the former species, being little more than one-twelfth of an inch long. It also occurs on the Gooseberry, and it has been noticed to curl up the leaves and deform the shoots more often than the former species. Lintner also refers to it as contorting the leaves.

Natural Enemies.—The larvæ and adults of the two-spotted ladybird (*Adalia bipunctata*) are often to be found feeding amongst the colonies of lice, and do inestimable good in keeping them in check. Larvæ of several species of hover flies (*Syrphidæ*) also feed on them, their leech-like repulsive green or dull red larvæ living amongst the lice in the blisters or curled leaves, and each devouring as many as twenty lice in a day. Ichneumons do not appear to be parasitic on either of these species, nor do the lace-wing or golden-eye flies (*Chrysopa*) seem to feed on them.

Prevention and Treatment.

Little can be done to prevent the attack of these Currant lice. Black Currants should be cut very hard in the autumn after an attack, and the strippings carried away and burnt. By so doing many eggs will be destroyed. Probably some benefit would be derived by the winter washing with caustic alkali wash. The use of this spray is not only to rid the plant of vegetal incumbrances—moss and lichens, which shelter various hibernating insects—but it also affects the eggs of certain insects, such as Chermes and some Aphididæ. It will also remove the scales of *Leucanium ribis*, often noticed on Currant and Gooseberry bushes.

Caustic alkali wash is prepared in the following way:—Dissolve 1 lb. of caustic soda and 1 lb. of carbonate of potash separately in water, then mix the two together and add to 10 gallons of soft water; then add to this $\frac{1}{2}$ lb. of dissolved softsoap (Chiswick). Spray over the bushes about February. When aphides are present on the bushes it is most important to spray early in the year, directly the lice are seen; that is, before the blisters appear or the leaves become curled up; the lice can then be readily reached by the spray, which cannot be done later in the year.

The most successful remedies for plant lice are paraffin emulsion

and quassia wash. Paraffin emulsion is prepared in the following way:—Mix equal portions of boiling soft-soap solution and paraffin together, then churn them up by means of a force pump until a creamy emulsion is produced. When required for use, mix the concentrated softsoap and paraffin solution with twenty times its bulk of soft water. Quassia wash may be substituted for paraffin emulsion, but it is rather more troublesome to prepare. The usual formula is as follows:—Extract of 5 lbs. to 10 lbs. of boiled quassia chips; 6 lbs. to 8 lbs. of softsoap; 100 gallons of water. The quassia should be boiled separately for two hours in just sufficient water to keep it liquid. The softsoap should be dissolved in water and then added to, and well mixed with, the quassia, the whole being then placed in and mixed with 100 gallons of soft water. If the fruit is fairly forward it is not advisable to employ the paraffin emulsion, as it might affect the flavour. Early spraying of the plantations with paraffin emulsion is the correct treatment, and will prevent considerable loss, which cannot be repaired when once the lice have got a firm hold.—("Board of Agriculture Leaflet, No. 68.")



CAMPANULA MACROSTYLA.

(See page 105.)

Hints About Liliums.

LILIUM longiflorum, L. Harrissi, and L. Krætzleri are perhaps more largely grown in pots than any other species and varieties, because their pure white flowers are always in great demand. For this reason any remarks which show the way to overcome defects of culture will, I think, be welcomed by many. I doubt not that many cultivators have, like myself, noticed that sometimes a batch of plants, just as they are coming into flower, will prove disappointing in consequence of the leaves turning yellow at the edges. This does not materially affect the quality of the blooms, but it is a disfigurement to plants intended for use in pots. I was recently somewhat puzzled for a time at the behaviour of two batches of plants. The bulbs were obtained from the same source, and were potted in similar soil, yet in one case the foliage was perfectly healthy, in the other the leaves turned yellow at the edges. Fortunately, however, I have discovered the cause at last, and a remedy too. When Liliums are potted a common practice is to plunge them over the pots in ashes or cocoa fibre, and they are often left in the plunging material until growth has advanced considerably. The result is that fleshy roots form at the base of the stem just above the surface of the potting compost. When removed from the plunging material the young roots are exposed to a dry atmosphere, and the leaves consequently suffer. On the other hand, those which are removed from the plunging material before young roots have formed above the surface of the soil, or others which have not been

plunged, show not the slightest sign of turning yellow at the edges of the leaves; yet all have in other respects received the same treatment. This moral may, I think, be applied—viz., remove Liliums from their plunging material early, or do not plunge at all; and I should perhaps add that if by any chance they remained plunged till the roots already described have formed, stand the pots in larger ones, and add fresh soil to cover the young roots before they are exposed to the dry atmosphere of a greenhouse in summertime.—H. D.

Trees of the Gay City.—Paris, that delights in everything calculated to add to its comfort and attractiveness, is reported to have planted half a million shade trees within the past decade, and she spends £20,000 a year to keep them in order and to plant new ones. Every street for a certain width is entitled to a row of trees on either side, while every street of a certain greater width gets a double row. The cities of Italy sometimes go further than Paris in this matter. They take infinite pains to train the young growing trees in such a way as to afford the largest possible area of shade.



Seasonable Notes.

THE chief requirements of Chrysanthemums at the present time consist in affording plenty of water to the roots, so that there is no check afforded the plants which will bring on mildew or encourage an attack from aphides. The latter are troublesome when they effect a lodgment in the points of shoots, and cover the under sides of leaves with colonies of them. Their presence certainly indicates lack of attention, chiefly in watering. They are not usually very troublesome to plants carefully managed from the first, and never allowed to suffer from lack of water, with occasional supplies of weak liquid, alike in the early stages as later on. These pests, however, if they do attack the plants, may be exterminated, and the best way to do it is to dust with tobacco powder, then syringe and wash it off. An effective insecticide is, however, more likely to cleanse the plants quickly. Laying them on their sides and directing the solution full upon them is more certain of destroying them at once than applying powder, which must afterwards be washed off. Earwigs, too, must be guarded against, as they are destructive to the points of shoots, and frequently eat away young growths and cripple buds. Some varieties are affected more than others, and these should be specially attended to in the matter of trapping the pests. Hollow Bean stalks, strips of brown paper, laid among the plants are suitable hiding places; also small pots partly filled with moss and hay, and inverted on the stakes, will catch many, examining the traps frequently and destroying all found.

Some of the strong rooted varieties, that are filling their pots with roots, will be materially assisted in retaining their bottom leaves, and the colour of the foliage generally, if weak applications of liquid manure and soot water are applied once or twice weekly. Strong manures must not be given too frequently, especially where growth is active and buds are not showing. Just at this period it is possible to cause growth to be too rampant, so stimulants must be given with care. Where room has been left at potting time to afford a top-dressing of fresh soil, some varieties that have produced abundance of rootlets near the surface will be much benefited by a layer of material, consisting of loam chopped up, one-fourth manure, and a pound of artificial manure to each bushel mixed in. A mixture of this kind may be kept at hand in a dry position, and as plants from time to time appear to need assistance, give them a top-dressing. The watering for a time afterwards must be done with a rosed can, so as not to wash holes in the soil.

As far as possible keep the main stems spaced out, in order that they may receive plenty of light and air. Tall varieties with several stems should have these tied out on the wires, while bushy plants ought to have each separate shoot staked out, and small superfluous growths entirely removed. The retaining of buds will be the next important matter requiring attention. Naturally late flowering varieties which are expected to flower early must have buds secured by the middle of August. From that date onwards continue to secure buds as they become ready.—S. D.

Book Notice.

British Trees.*

A HANDSOMELY bound book, containing thirty-one full page illustrations. On these points the work is commendable, one of those that a gentleman with means might well invest in as an additional ornament to his library. Not that the illustrations of the chosen trees are at all what they might have been, however. Most of the photographs have been taken in Surrey or places in the Midlands, and naturally the finest specimen trees of their several kinds are not all to be found in so restricted a sphere. The illustration of a Birch tree is no more like the typical and elegantly beautiful individuals we have seen on the sides of Scottish and Highland glens than an ordinary Service Tree is. The author has attempted to depict a great variety of different trees on the same scale of magnitude; that is, each tree, whether a giant Oak, Horse Chestnut, or Beech, has been photographed by the same camera that was equally employed

to "take" such dwarfier trees as the common Holly, the False Acacia, Cherry, and White Thorn. The adoption has had this result, that the characters of all the trees have been reduced or magnified as the case happens, and instead of being distinctive, they are all uniform, and do not confront one in their honest types.

The author again has entitled his book "British Trees," but he includes also trees that have become naturalised, such as the Sweet Chestnut, the Tulip Tree, Sequoia, and Walnut amongst others. Of course the literature on tree growth, arboriculture, and allied phases in this domain of authorship, is meagre, and we ought to be thankful to all who, in any manner whatever, help us to know more about trees, and to cause us to love them more and value them as they should be valued. Yet what we have written in review of this book is the simple expression of our convictions on certain of its features. The text accompanying each illustration is valuable, and so far as we have read, and are able to judge, it is accurate. The author perhaps labours under the disadvantage of a limited practical experience of some of the species, but that does not affect the value of his teaching so far as it goes. We enjoyed reading many of the piquant little articles on individual trees, and will presently quote one *in extenso* to show the character of the other writings.

In his preface Mr. Tollemache disarms the critic, for he states that he has "no intention of treating of the subject from a strictly scientific point of view." "Our main purpose," he says, "is to give a description of forest trees in a concise and popular form." The book consists of ninety-eight pages (6½ inches by 9¾ inches), the paper being very solid and smoothly rolled. The typography leaves nothing to be desired. Following is a sample chapter, and deals with the Poplar.

The Poplar.

The White Poplar, *P. alba*, the Black Poplar, *P. nigra*, and the Asp, *P. tremula*, are all believed to be indigenous to this country. "Some derive the word *populus*," it is said, "from *paipallo*, to vibrate or shake; others suppose that the tree obtained its name from having been used in ancient times to decorate the public places in Rome, where it was called *arbor populi*, or the tree of the people." Like its ally the Willow, the Poplar is a dioecious plant, producing only one sex on an individual tree; but in the Poplar the leaves are wide and short, whereas in the Willow they are long and narrow. The bark of the Poplar, too, except that of the Lombardy Poplar and of some old Black Poplars, is inclined to be smooth, while the bark of the Willow is rough. The leaves of the Poplar are triangular. They expand in May, and are retained till late in the autumn, when they turn to a lemon yellow colour. The male catkins, which are very large and of a purplish red, appear about the end of March. Owing to their long and thin footstalks, the pale green shining leaves of the Poplar become agitated by the slightest breeze—a feature still more observable in the Asp, on which the footstalks of the leaves are flattened.

When Zephyrs wake,
The Aspen's trembling leaves must shake.

In the White Poplar the leaves are lobed, and covered with a white down underneath. As the tree grows up, the bark on the upper portion of the stem and branches becomes a greyish white. The leaves of the Black Poplar are not lobed; the edges are serrated, they are smooth on both sides, and of a paler green beneath. The Black Poplar is the more common of the two, and it produces the best timber, which would be more extensively used for rough boarding if it were not for the large importations of cheap foreign deal. It is very adaptable for boards on which wheelbarrows are run, the tough nature of the wood rendering it less liable to splinter than deal. In point of fact, the cost of falling and sawing is as much as Poplar timber is worth in the present day, unless it lies very handy. The timber of the Asp is comparatively worthless.

The Poplar is generally propagated by cuttings, or from suckers, which the Asp in particular throws up in abundance. They grow freely in woods after the underwood has fallen, and die down in a few years as the surrounding coppice wood rises. Like most rapid growing trees, the Poplar has a brief duration of life. Where trees are required in a short time, there is probably no tree that will serve the purpose better than the Poplar. In early summer the young leaves, with their fresh white down, give the White Poplar a particularly bright appearance, and one does occasionally meet with a handsome specimen of the Black Poplar, like the subject of our photograph; but frequently the Poplar is rather a stiff-looking tree, thinly clothed, and perhaps devoid of branches for 20 or 30 feet from its base. The not uncommon practice of cropping the stem, besides disfiguring the tree, is of course harmful to it. Through the cells of their leaves plants take in and digest the carbonic acid gas which is so essential to their nourishment.

Of the foreign Poplars cultivated in England the Lombardy Poplar, *P. fastigiata*, a variety of the Black Poplar, is the most familiar. It is easily distinguishable by its Cypress-like growth, and by the roughness of its bark. On the banks of the River Po it is said to grow naturally. Introduced into this country about 1750, no tree that we have attains a greater height in the first twenty years of its growth. Its endurance of smoke, and the small compass it requires, peculiarly commend it for planting in the gardens of our towns and suburbs.

* British Trees, with illustrations; by Hon. Stanhope Tollemache, B.A. London: Sampson Low, Marston & Company, Ltd. Price 14s. nett.



Autumn-sown Sweet Peas.

A row of Sweet Peas was sown in the garden here last autumn as an experiment; the results were that they commenced flowering the end of May, and still continue flowering on July 13th. They were protected through the winter from the birds by a piece of garden netting. My employer was so pleased with the result that I shall continue the experiment. I may add that this soil is rather sandy, and the garden fairly sheltered.—G. W. G.

Carnation Germania.

A few days ago I had the pleasure of calling at a well known Midland garden, where I saw the finest collection of the above it has ever been my privilege to see. There were between 300 and 400 plants in 5-inch pots, each carrying a grand spike of large, well formed, highly coloured flowers. There is no doubt but that is the way to see Germania at its best. Wintered in cold frames in small pots, and potted in the early spring into the flowering pots, its rather tender constitution does not suffer, and the flowers being protected from the weather and insects, have time to develop, and do not show the traces of rain or thrips which so sadly mark them in some seasons. After flowering the plants are turned out of pots and planted in a border, where they remain and flower next year. The gardener does not layer from this year's pot plants, but prefers layers from the open ground and pots them on, and judging from the grand colour and quality of the flowers he has hit the right treatment.—W. H.

Exhibitors as Committeemen.

Mr. George Wadeson, in his criticism of the exhibitor-committeemen question, says his opinion is very strong, and claims to champion the cause of the outside exhibitor. Though his opinions may be very strong, his arguments appear to be very weak. He says, "Surely one exhibitor is as good as another, and why should committeemen-exhibitors take advantage over outside exhibitors?" I am not aware that any such comparisons have been drawn, and certainly Mr. Wadeson misconstrues my remarks and meaning, wherein I say that it would be fatal to the work of the day if the committee were composed of all exhibitors. The work of the committee on the show day is to see to the regulation of the staging of the exhibits, take charge of the tents or hall, both in the interest of the society and exhibitors, and to discharge these duties requires that a portion of the members should be free and unfettered. Naturally in the morning, and again at the close of the show, exhibitors must attend to their exhibits, and in doing this they cannot devote much time to other duties. As a rule, too, the exhibitor-committeemen comprise a minor portion of the whole, so that their services can be used at a portion of the day when it does not interfere with staging or clearance. If committeemen who happen to be exhibitors are permitted to "go round" with the judges after the tents, the field, or the hall is cleared, then it is clearly the fault of the secretary in allowing it; and even if such a thing happened, what judge worthy of the appointment would allow himself to be prejudiced in his work by any solicitations of an interested exhibitor? It is to me a matter of surprise that your correspondent should admit having held the position of secretary, and yet charge committeemen with such unprincipled tactics. Contrary to Mr. George Wadeson's expectation, I could, if need be, point to several good shows honourably carried on where a portion of the committee are annual competitors; and I can go further, and give instances where the secretary himself has been among the prizewinners, and yet both the committeemen's and the secretary's names and exhibits have been passed in judgment without suspicion or favour, as they should be.

One society with which I am well acquainted from a competitive point of view, and one that has existed long enough to celebrate its jubilee, though comprised of a committee of some forty or more members, numbers not one gardener even among its selection, and with what result? I do not know of another where so much complaint exists on the show day bearing on its general management. I can honestly predict that the election of two or three impartial exhibitors on that body would have the effect of materially improving both schedule and management. But this is not done, because two or three "old hands" are of the same strong opinion as Mr. Wadeson, and think that if they elected gardeners, who might happen to be competitors, they (the latter), in a natural inclination, would vote for everything only that would benefit themselves. To adhere to such old and obsolete fashions is to court ridicule and disrespect. The

motto of horticultural societies, the same as in all others, should rather be progress, and how is this to be installed in a new century when the rules and conditions that obtained nearly half a century ago are still jealously guarded by a few fanatics? No, Mr. Wadeson, I repeat that I see no objection to a committeeman competing for prizes when the management is directed as it should be, and disinterested judges appointed to award the prizes; and having been myself a committeeman-exhibitor, I cannot accept this correspondent's biased opinion relative to the question under notice. The many advantages alleged by becoming jointly committeeman and competitor certainly are, according to my experience, non-existent. Despite the deprecatory view advanced, Mr. Wadeson admits "that his experience teaches him that men experienced in the art of exhibiting make the best committeemen." The chairman and secretary have vested in their hands full authority to act, both to the interest of exhibitors and the society, and if they allowed an exhibitor, even though he be a committeeman, to do as Mr. Wadeson charges him with, going round and dictating to the judges for his own benefit, then the rules of the society would at once become hopelessly violated, and the prestige of the officers removed from honourable rank. Such actions would be mean and repulsive.—W. S.

[A letter on this discussion from Mr. Wadeson has been held over.—ED.]

Wall Copings.

I had hoped that some other gardeners would have unsheathed their pens and recorded their verdict for or against fixed copings. Some twenty gardeners visited me last week, and, so far as I could gather, were all against "fixtures," because they keep off all the dew and nearly all the rain. There is nothing better to destroy filth than a thunderstorm. They also involve the expense of watering and syringing for some six months or more, and do more harm than good. In the best garden that I have ever seen there is about half a mile of glass coping, which is put up just before the blossoms expand and taken down early in June when fear of frost is over. They are then placed together in pairs, forming a miniature house, protecting and maturing a variety of plants through the winter until they are required for the walls again about March. Glass copings are very expensive, 100 yards (without supports), 18 inches wide, costing £45; whilst wood, 12 inches wide, with supports, costs £10.—C. C. ELLISON.

A Problem in Heating.

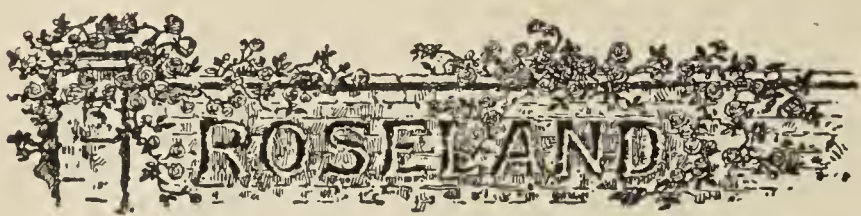
I must apologise to "Aqua" for not replying to his question earlier, but really, if he considers a moment, he will see what a futile question it is. Why do I not recommend the plan of dipping pipes? Now no one with an economic turn of mind would go to the trouble of causing an obstruction, and then arranging for its removal by the additional expense of air-taps. But when the obstacle, in the form of a doorway, or what not, exists, then I do recommend it very strongly. As to utility standing before appearance, if I had to get over such an obstruction as a pipe running across a doorway every time I entered a house, I should often find myself wondering where the utility comes in, whether in a market place or not. But, really, in such a discussion as this we are going back twenty years in the science of heating. More than two decades ago I saw this system working well in a church not far from where I write, and have repeatedly seen it since. "H. D." appears to think it a new idea; it is not. But all the same, he has done a good service to gardeners by so clearly explaining it, and "Aqua" may rest assured that if he wishes to go on stepping over his pipes in the doorway, perhaps upsetting his plants or himself in the process, no one wishes to prevent him. But he will not hinder others from finding and practising a more excellent way.—H. RICHARDS.

A Pond Weed.

In reply to Mr. Webster, page 77, he will find the Potamogeton a very troublesome plant to exterminate. I can sympathise with him, having gone through a similar experience, but I am afraid I shall only be a poor comforter, as nothing but repeated cleaning will rid the pond of it. Cutting the growth frequently weakens the plants, but it takes a long time. I used to pull out root and all with a twitch rake, and cut off the growths directly the first floating leaves made their appearance.

It is an herbaceous plant, not an annual, and it increases and multiplies very rapidly by means of the submerged rhizomes. If Mr. Webster can drain the pond and clear out the weed in early autumn, replacing the Lily rhizomes and destroying those of the pond weed, he will effect a clearance, but if this is impossible and he persists in the cutting down process, the weeds will gradually disappear.—R.

[See Kerner's "Natural History of Plants" (English translation), vol. i., page 551. There a figure of Potamogeton crispus, L., appears. Of this plant he says, "It produces late in autumn, near the surface of the water, shoots possessing short leaves, which are detached from the old stem before the uppermost layer of water is frozen. These sink . . . and bore their way into the mud by their pointed extremities." These "special winter buds" propagate the stock.—ED.]



Beds of Roses.

BEDS of several varieties of Roses are often patchy in character when they display their blooms, some of which will bloom before others. This is in some respects an advantage—for instance, when the Roses are wanted for cutting chiefly, and a brilliant display all at once is a secondary consideration. But when this is the case the grower need not be debarred from growing a mixed lot of varieties in one bed, for he may have other and perhaps smaller beds filled with one variety only. Having plenty of space is one consideration. Everyone cannot command a number of beds for the special purpose of growing one variety, but where this can be done it is an excellent way of showing off the good points of many beautiful Roses. Separate beds, however, need not always be devoted to this method. A plan almost as good, especially with varieties blooming about the same time, is to group a number of plants in such a manner as to form, when all are in bloom, a tasteful combination of colours. Tea Roses, by reason of their sweet scent, delicate colouring, and freedom in blooming over a considerable period, are extremely useful. Maman Cochet, a Tea variety having a rich creamy tint, is excellent in a bed or group. It is a large, full Rose, and has red, long-pointed buds; the growth is good and clean under good cultivation. Souvenir de S. A. Prince is a beautiful, large-flowered white of the purest colour. It is equally good as an exhibition Rose, being one of the finest for this purpose in the Tea section. A large bed in full flower looks superb. Viscount Folkestone, also an exhibition variety of the choicest type, having creamy pink flowers with a deeper centre, is a most imposing variety; the blooms are usually large and fine, the growth strong, clean, erect, and compact. Madame Lambard has fine, bright red blooms, large and full. This is one of the best coloured varieties among the Teas, and a bed of it is much admired, though it is not quite so free blooming as some. Gustave Regis makes a charming bed; it is a wonderfully compact-headed Rose with clean growth, and fine large canary yellow blooms edged with carmine. Jean Pernet possesses medium growth, and produces flowers of creamy white, which make an attractive bed.

Hon. Edith Gifford is another Tea of very free flowering qualities, very good in bud, and develops into a grand Rose; the colour is creamy white tinted rose. A bed of it is superbly beautiful. Rubens is very attractive in a bed; the beautiful white blooms tinged with pink and yellow are much admired alike for their colours and the effect produced by the plants when flowering freely in a mass. One of the best Noisette Roses for a bed is Fellenberg, a remarkably free bloomer, producing blooms of medium size in fine and luxuriant clusters; the colour is bright rosy crimson.

Among the Hybrid Perpetuals there are some splendid bedding Roses. Captain Hayward is a very dwarf grower, and produces exceptionally large and fine blooms, very fragrant and full, of a superb crimson carmine colour, fading to a lighter hue with age. Baroness de Rothschild is valuable because it blooms somewhat later than many of this class, and gives blooms of a rich quality, very large in size, and of a pale delicate rose suffused with white; it is one of the best Roses for size, colour, and form. Merveille de Lyon, in habit of growth and colour of flower, as well as time of blooming, is very similar to the last named variety; it is a very compact, dwarf, thick-stemmed grower, almost a counterpart in appearance to Baroness Rothschild, from which it is a seedling; the colour of bloom is white, tinted rose peach. Countess of Oxford, one of the rich carmine red Roses, is decidedly compact and erect in growth, which makes it most suitably adapted for a bed. Dupuy Jamain, another of the rich crimson varieties, has also strong, fine growths; the blooms are large and full, and the plant is a free bloomer. Mrs. J. Laing, one of the best known varieties, with soft pink blooms, is, by reason of its strong erect growth, specially adapted for cultivation in a large bed.

Ulrich Brunner is exceptionally fine in colour, its light crimson blooms being, when in good condition, most attractive, and a bed of it gives a fine effect. Glory of Cheshunt is a strong grower, producing clean erect growth; the blooms are of a rich shaded crimson, and are produced very freely. Camille Bernardin has splendid large foliage. It is a compact good grower, with blooms of fine form, and bright rich red colour; it makes a showy and attractive bed, the blooms being produced freely. Another grand variety for a bed is Captain Christy. It is a strong-growing Rose, with large foliage and erect growths, producing flowers of great size and substance; they are of a rich blush or flesh colour, suffused with pink. Duke of Edinburgh is a

Rose of exceptional merit; the effect produced by a mass of its deep velvety crimson blooms is very good. La France is usually classed as a Hybrid Tea. It is a good variety for a bed; the colour is a deep pink, and the growth is good.

Among the China Roses there are some most effective varieties for beds—indeed, most of the Roses for this class are in every respect well adapted for growing in a mass. The blooms are bright, pleasing, and freely produced, though not so large and choice in quality as Hybrid Perpetuals and Tea varieties. Cramoisie Superieure is one of the best; the flowers are of a brilliant crimson, and produced in clusters. Madame Jules Grolez is one of the most attractive pink varieties belonging to the China section, and worthy of special culture. Madame Eugénie Resal is a beautiful Rose in this section; the colour is variable, ranging from coppery red to bright rose, and the foliage is dark coloured; the half opened buds are very pretty. James Sprunt is another most interesting variety, a sport from Cramoisie Superieure. A bed of this is very effective; it has deep crimson, moderate sized, pretty shaped blooms, produced in clusters.

The Polyantha varieties of Roses are very small, dwarf growers, remarkably free in producing clusters of small blooms, which, however, are attractive. Either in a mass of one variety in a bed, or a bed of mixed plants, a good display may be produced. Groups of one variety in a very large bed prove to be an interesting feature. The following varieties planted in the manner suggested would be attractive:—George Pernet, blush pink; Floribunda, blush; Little Dot, white; Perle d'Or, nankeen yellow with orange centre, flowers produced in large clusters, very double; Clothilde Soupert, blush white on strong stems; Madame Chas. Brunner, blush, immense clusters of semi-double flowers; Gloire des Polyantha, deep rosy pink; Mignonette, clusters of blush pink, a pretty miniature double Rose; Ma Paquerette has small double pure white flowers produced abundantly and continuously for several months; Red Pet, deep red flowers or dark crimson, also a free and continuous bloomer; White Pet is similarly free blooming and useful, producing immense clusters of flowers.—E. D. S.

Temple Rose Show Notes.

There is always a great interest attached to the challenge trophy, both for amateurs and professionals. With regard to the former, no one seems quite able to pluck the laurels from Mr. E. B. Lindsell's brow. Mr. Pemberton sometimes runs him very hard, but cannot quite master him. His stand this year was very beautiful, and we are sure to find in his collection some of the best dark H.P.'s in the exhibition, such as Capt. Hayward, Earl Dufferin, Marie Banmann, Prince Arthur, A. K. Williams, Comte Raimbaud, Horace Vernet, extra good; Alfred Colomb, and Fisher Holmes. The nurseryman's challenge trophy always excites much interest, and generally takes a long time for the judges to adjudicate upon. Many seem to question the justice of the decision which gave the first award to Messrs. Harkness. There can be no doubt that theirs and Messrs. Cant ran very close, and contained many very superb flowers. Outsiders are very unable to judge the difficulties in deciding in this class, and it is rarely the judges have finished, though there may be only three or four stands, before the time allotted to them has expired.

The challenge Tea trophy was won by Mr. O. G. Orpen, who has this year proved himself invincible. His stand for eighteen was a most lovely one, containing Maman Cochet, Mrs. E. Mawley, Cleopatra, The Bride, Ernest Metz, White Maman Cochet, particularly fine; Innocente Pirola, Sylph, Souvenir d'Elise Vardon, Bridesmaid, Maréchal Niel, Catherine Mermet, and others. These might all have been characterised as "medal blooms," so beautiful in colour and exquisite in form. The medal blooms were well worthy of the honour bestowed on them. It was only about four years ago (?) that the late Mr. Benjamin Cant took up the hybridisation of Roses, and this year his sons come out with two gold medals to their credit. One was awarded at Richmond for a grand H.P., of brilliant colour and delicious perfume; and now they obtain another for a beautiful new Tea Rose of the Anna Olivier type; in fact, my friend the Rev. H. B. Biron says that it reminds him of a sport of that variety obtained by my neighbour, Mr. H. Foster of Ashford. This is, I think, an unique case, and must encourage the Messrs. Cant to go on in their work of hybridisation. The garden Roses were exhibited in great numbers, and formed a very attractive feature, as they do now in every show. The arrangements of those exhibited by Messrs. Paul & Son and Messrs. Cooling were of their usual excellence, and attracted a large number of visitors during the day. Mr. Tate, from his beautiful garden at Downside, Leatherhead, exhibited a fine collection, and those who wish to cultivate this class of Roses cannot do better than study the names of the Roses in their exhibits.

I think there is a great mistake made about the exhibition of Roses in vases. It is all very well to have a few classes in order to show how well Roses look in this way; but when it is suggested that

our boxes of cut blooms ought to be discarded and vases substituted. I think people hardly know what they are talking about. Some of our large exhibitors would have to bring up about two hundred vases, and I think that this is a burden from which they would naturally shrink. Such are a few of the things which struck me most in connection with our late grand show of Roses in the Inner Temple Gardens; but I cannot conclude these notes without bearing testimony to the invaluable services rendered by my co-secretary, Mr. Edward Mawley, who has worked hard, and upon whom the late show entailed an immense amount of labour. It would be ungracious also to close these few notes without paying my tribute of gratitude to our venerable president, the Very Rev. the Dean of Rochester, and I am sure he must feel satisfied that his efforts have been so successful, and it is to be hoped that, year after year, the gardens of the Inner Temple may have as successful a gathering of the National Rose Society as they have during the last eight years of the Royal Horticultural Society. —D., Deal.

(There, that's one good solid paragraph finished. This new fashion in literature certainly saves one a lot of trouble. Before it became popular I used to write novels; now I don't trouble about a plot, or characters, or anything. I simply sit in the garden from ten o'clock to four—Saturdays, ten to one—and put down my thoughts just as they come, mixed up with little bits cribbed from the *Journal of Horticulture*. In another hundred pages or so the book will be finished, and I shall bid my darling readers good-bye.)

Close by the greenhouse, 4 feet from the Gooseberries, and 2 feet 6 from the second-best Honeysuckle, I have dotted in a clump of Dandelions. Such brave flowers, so sturdy and self-reliant! Oddly enough, they have all turned out yellow with me. Why are none of them purple? Perhaps it is the soil. But they are not difficult to grow. Put them singly in small pots proportionately to the size of the tubers, in a compost consisting of equal parts of fibrous loam, leaf soil, and sand. Press the soil rather firmly if a short growth and a long season are desired, stand the pots on a bed of cocoa-nut fibre, or



MESSRS. PEED'S GROUP OF HARDY FLOWERS.

(See Report of National Sweet Pea Society's Show.)

The Cult of Culture.

An Advance Chapter from my next "Garden Book."

On the grass yonder, between the Apple tree and the Pansies I see—but, by the way, dearest reader, have I told you about the sweet old Apple tree? Ah! I thought not. Well, it shall have a nice, pretty chapter, all to itself later on. Between it and the Pansies, which I sowed myself in a light loam early in April, and they haven't come up yet, though there are others among the Potatoes which are tall and straggling, like this sentence: but it's only eleven o'clock on Monday morning, and I must spin out this morning's observations into a whole chapter, I see, as I said before—what do you think? A fallen leaf. A fallen leaf. Say that slowly and distinctly twenty-seven times, and if the poetry of it all doesn't sink into your very soul, I'm sorry for you. Alas! poor leaf! If it were still upon the tree it would not lie upon the dark, damp earth; stirred by the gentle wind 'twould murmur a thousand caressing messages to its little brothers. Fate willed it otherwise. Ah! complete, ah! mournful parable of life. The leaf is not on the tree. It lies upon the ground—lies between the tree and the dear Pansies; forsaken, desolate, alone! The Apple tree is on its right—dread symbolism!—the Pansy border on its left. The leaf is on the ground.

plunge them in it, and keep the temperature of the house at 65° to 70°. At least, this is how they tell one to grow tuberous Begonias, and the same plan ought to answer for Dandelions and Cauliflowers, and things of that sort.

It is nearly twelve o'clock; "noon," in the quaint old Anglo-Saxon phrase. A sparrow has just hopped across the Lettuces—a sweet little bird, with two eyes, two feet, and one beak. But the early worm left some hours ago on pressing business. Ah! dearest reader, the saddest words in the language. Too late! Too late! Too late! Oh! the bitterness of it all!

But I must be brave. I must water the Geraniums. (Plant out early in May, in a south aspect, and mulch freely.) Yes; I must water the Geraniums. So do the petty, insistent duties of life break in upon our most spiritual moods! Yet even here fresh disappointment lurks, envious, malignant. The pump is out of order. Besides, there are no Geraniums to water. The cat scratched them all up last week.

Now it is nearly lunch time, so I must finish off this chapter. Down the pleasant path I stray, among the Mignonette and Musk and Marigolds. Look at that swift swallow, his wings sheening in the shine of the sun!—but lunch is ready. Sit still, dear, darling reader, sit very still; after lunch I'll come and talk to you again.—A. C. D. (in "Punch.")

NOTES & NOTICES

Trees in Piccadilly.—During the widening of Piccadilly between Hyde Park Corner and Walsingham House every effort will be made to retain the existing trees, and new trees will be planted where necessary.

Orchids.—It will be observed that "The Week's Cultural Notes" have been revived in our Orchid page. From time to time our correspondents will fully discuss the special needs of individual genera, for the consideration of those who love and grow this very varied class of flowering plants.

To Cure Stings.—In view of the many mosquitoes which have invaded this country during the hot weather, the following recipe for "bites" may be useful: Rub the place stung with the juice of a raw Onion, and the irritation and pain, after one or two applications, will promptly cease.

Apple Tree in Blossom.—An Apple tree in the garden at 8, The Grove, Ealing, occupied by Mr. E. Jones, is at the present time not only bearing an abundant crop of fruit, but is covered with beautiful bloom. For the tree to be blooming at this period of the year is very unusual.

Obituary.—It is our sad duty to record the decease, on July 30th, of Mr. George Cuthbert, sen., in his eighty-sixth year. He was the last surviving son of Mr. James Cuthbert at the Southgate Nurseries, Middlesex, and it was here that the late gentleman passed away in a quiet sleep. He was for many years a member of the firm of Messrs. R. & G. Cuthbert. In him the Gardeners' Royal Benevolent Institution, to which he had contributed since 1849, loses a valuable supporter.

Flower Show in Sandringham Park.—The annual show of the Sandringham Estate Cottage Horticultural Society was held on the 24th in the park at Sandringham. Though none of the Royal family attended, the show was not the least successful of the series. Their Majesties presented special prizes for the best kept cottage, and the best kept and stocked gardens on the estates of Sandringham and Babingley, West Newton with Appleton, Wolferton, Dersingham, Anmer, and Shernbourne. Nearly 100 prizes were awarded. Dull and cool weather prevailed, but several thousands visited the show.

Early Potatoes in Wigtownshire.—The early Potato industry in Wigtownshire has, says the "Galloway Gazette," eclipsed all records this season. On one farm on Luce Bay the crop was all raised and into market by Monday, 17th June, a record for the county; and Mr. Robert Lamb, Gallowhill, Stranraer, even excelled that by sending a consignment of Puritans to Dumfries so early as 8th June, and, at this rate, Girvan will soon not be in it, though the greater distance from the markets is a drawback to this locality. Messrs. Leyburn & Co., Glasgow, have been the most extensive buyers of the Wigtownshire crops, and the Wholesale Co-operative Society has also bought largely, while other buyers have been in the district this year for the first time.

Horticultural Club.—The annual excursion took place on Wednesday, 17th inst., and was most successful; it was attended by both the chairman and vice-chairman, Sir J. D. T. Llewellyn, Bart., and Mr. Harry J. Veitch, and also a goodly number of members and lady friends. The company travelled by rail to Cheshunt, and under the guidance of Mr. Geo. Paul visited their celebrated Rose gardens, and were most kindly welcomed by both Mr. and Mrs. George Paul. Brakes were in attendance, and the party proceeded to the wonderful nursery grounds of Mr. Thomas Rochford, where they were shown the extraordinary manufacture of plants for the London market; they received a right royal reception from Mr. and Mrs. Rochford, and sat down to a sumptuous luncheon. They afterwards drove to Panshanger, the seat of the Earl Cowper, and visited both the grounds and the house, with its beautiful pictures and articles de vertu. They went on to Hertford, and dined at the Dimsdale Arms, afterwards leaving by train for London. The day was almost too fine, as the heat was very great; everything went off most successfully, and was certainly one of the most pleasant of the many pleasant excursions of the club.

Grapes Ripening.—On page 115, under "Work for the Week," and the sub-title of "Grapes Ripening," will be found a few timely notes that may be of importance to growers who wish to "finish" their Grapes in good form.

Cherries.—We acknowledge with grateful thanks the receipt of a handsome hamperful of Cherries from Messrs. E. A. White, Ltd., Paddock Wood, Kent. May other friends be so kindly thoughtful, for only cobwebs grow in the editorial sanctum. The Cherries were amongst the largest, cleanest, and best we have seen and tasted during this season.

Butterflies in Battersea Park.—Some time ago we announced that the London County Council had proposed to supply the parks with butterflies. The Council has at length fulfilled its original proposition, and a house has been erected at Battersea Park for the cultivation of butterflies, and from it some 400 of the insects are just now being turned loose daily to subsequently beautify their surroundings. The butterflies are intended for ornament only, and not for the instruction of budding naturalists. Originally some 8200 caterpillars were placed in the house, and it is interesting to watch their process of development into gorgeous-hued beauties, chiefly of the tortoise-shell, peacock, red admiral, and the more common white butterfly.

Boston (Lincs.) Flower Show.—On Wednesday, July 24th, the Boston folk furnished, or had furnished for them, a splendid horticultural and agricultural show. Unfortunately rain prevented the large attendance there undoubtedly would have been. One of the chief attractions was Messrs. Johnson's Sweet and culinary Pea exhibition, which had a tent all to itself. There were upwards of 1100 specimens of Sweet Peas and 200 dishes of culinary Peas, and the appearance of the tent was a perfect picture. Some of the Sweet Peas were brought to absolute perfection, the delicate colouring of the flowers being as varied as it was dainty, and Mr. R. Dean, V.M.H., who discharged the difficult and onerous office of judge, was most enthusiastic in his admiration of the whole show. Since Messrs. Johnson popularised the Sweet Pea in the Boston district it has been extensively cultivated, as the present exhibition shows. Apart from the competition, Messrs. Johnson showed a large variety of blooms, which were universally admired.

Notes from Edinburgh.—Referring to the summer show of the Scottish Horticultural Association, one of our Edinburgh correspondents states that there is a probability of this wonderfully successful and enterprising Association expanding its chief summer meeting into a great open-air Rose carnival, after the manner of the York Gala and other southern shows. The collection of Strawberries was quite an exhibition of itself in quantity, quality, and variety. Royal Sovereign seemed to hold sway in attractive colour and size, though not equal in flavour to some humbler looking sorts. Mr. Turner's exhibit from Dalhousie was a most prominent feature, and richly deserved the admiration it received; Sovereign and Gunton Park were his most prominent varieties. Many other exhibits of Strawberries were of great merit, but space forbids particulars. Those from Mr. Taylor, Currie Hill; Mr. Fordyce, Bonally; Mr. M. Temple, Carron House; Mr. Mackenzie, Trinity; Mr. Smith, Oxenford, and others, were fine specimens of cultivation. The variety W. E. Gladstone, from Mr. Scarlett, was greatly admired for beauty, and appreciated for flavour.

Variorum.—In the Thames Embankment Gardens, London, there are at present some fine *Catalpa syriaca* in flower. They seem to succeed very well here. * * A plant of *Lilium Henryi* in the Himalayan house at Kew is at present carrying sixty-nine flowers and flower buds on one stem. * * Prof. L. H. Bailey is now on the Pacific Coast. He is lecturing on horticultural topics at the Summer School at the University of California. * * Attention is called to the fact that the eleventh census taken in America last year found nearly twice as many Apple trees in the nurseries as are growing in the orchards of the United States. * * The Michigan Bean crop is reported, says "The American Florist," looking extremely well, recent weather having been very favourable. * * In 1900 Denmark supplied the United States with seeds to the value of 23,181 dols., while in the same period we exported to that country 120,995 dols. worth. * * Tissue paper string enclosing seeds at regular intervals is the latest device warranted to be economical of labour and material in the sowing of seeds. * * The Imperial Trading Co. of Yokohama will open an agency at New York for the sale of Japanese Lily bulbs, plants, and general Japanese horticultural products in August.

Campanula macrostyla.—This is an annual species of quaint characteristics, whose likeness our illustration portrays on page 99. Sow seeds in light soil at the edge of any hardy plant border early in May, and thin-out the seedlings. The flowers are violet-blue; or, in dry summers such as this, they are bright mauve. It is a commendable little plant for the front of hardy plant borders.

Bulb Company Chartered.—The American Bulb Co., Petersburg, Va., has been granted a charter. The company is organised for the purpose of planting, growing, and trading in bulbs, blooms, and plants of every kind. The capital stock is to be not less than 10,000 dols., nor more than 50,000 dols. The amount of real estate to be owned by the company in each of the states and territories of the United States shall not exceed 500 acres in each state, and the aggregate value shall not be more than 1,000,000 dols. The stockholders of the company represent several million dollars.—("Baltimore Herald.")

Bankruptcy.—An inquiry concerning the failure of the British Horticultural Association (Limited), which carried on business as nurserymen, and which succumbed in October last with liabilities £2659, and assets nil, was held on July 29th in the Bankruptcy Court, London. Mr. E. T. Morgans stated that he had acted as secretary of the Metropolitan United Floral Company at a remuneration of 10s. weekly. He accepted the post because he was able to do the work in the evening. It was stipulated, however, that he should drop his surname and use the name of Edwin Thomas. He had been known under the names of Edwin Thomas and Thomas Morgans. Some further evidence was given and the proceedings terminated.

Excerpta.—One of the first books on English gardening which appeared in 1574 was written by Mr. Thomas Hyll, a citizen of London. He strongly recommends gardens with "mazes, labyrinths, and knots, all to be made with scented herbs." * * Writing to the "Kidderminster Shuttle," a writer says "I have just seen a nice specimen of that pretty wild flower, the Moth Mullein (*Verbascum Blattaria*); rare, except in the West of England. May I ask whether any of your numerous readers have met with it? The Greater Broom Rape (*Orobancha major*) is common this year." * * The Holland correspondent of "The American Florist" states that with them they have lost a large acreage of Turnips and Cabbages on account of the severity of last winter. Some varieties have suffered more than others, but as much as one-half of Cabbages, and even more of the Turnips had been lost. In consequence of the open and severe winter Pansy plants suffered greatly in Germany, particularly in the northern part, and what plants carried through the winter are very backward. This will retard and shorten the crop of seed. Other perennial plants have suffered also, so that many kinds have to be replanted. From Magdeburg a correspondent reports, June 24th, as follows:—Peas, Beans, Mangold Wurtzel, Parsley, Lettuce, Onions, and Cucumbers, good so far; Carrots, from middling to bad; Kohl Rabi, poor; Kale, very bad; Cabbage suffered greatly during the winter.

A Spoiled Exhibit.—Sheriff-Substitute Sym, Perth, has issued his decision in a case of unusual interest to the gardening profession. Mr. James Beisant, head gardener, Castle Huntley, Longforgan, as an individual, and also as an assignee of his employer, Mr. Armitstead, sued the Caledonian Railway Company for £100 in consequence of damage to valuable Chrysanthemum blooms entrusted by him to the defenders for conveyance to the Edinburgh Chrysanthemum Show in November last. A special van had been engaged for the blooms. While the van was being shunted at Longforgan it was run into and disabled by the shunting engine, with the result (as alleged by the pursuer) that the boxes of blooms were thrown violently from one end of the van to the other, spilling the water supplied in tubes to keep the blooms fresh, and many of the blooms were found crushed and cut, and many of the petals shaken off. The blooms were 144 in number, picked from about 600 plants of the choicest, newest, and costliest varieties. Expert evidence was given by Mr. J. W. M'Hattie, superintendent of parks to the Corporation of Edinburgh (who was a judge at the show in question), Bailie Melville, president of the Dundee Chrysanthemum Society, and others. The Sheriff's finding was that the damage suffered by the pursuer consisted of loss of the chance of gaining the Edinburgh City Cup and other prizes, with the accompanying loss of money, loss of professional distinction and advertisement, and partial loss of time, labour, and expense devoted to the production of the blooms, which may be moderately estimated at £60, and found the defenders liable to the pursuer, in this sum, in name of damages.

Severe Thunderstorm in Glenlivet.—A heavy thunderstorm passed over the Glenlivet district, Perthshire, on Thursday, and a good deal of damage was done, not only by lightning, but by the heavy rainfall. The storm was most severely felt in the lower district.

American Forestry Association.—The summer meeting of the American Forestry Association, announced for July 10th to 12th, has been postponed until August 27th to 29th, inclusive, when it will meet in affiliation with the American Association for the Advancement of Science, at Denver, Colo.

Legal Notes: Stacey v. Wm. Bull.—A simple case, in which varieties of Cucumbers were the subject of dispute, came before Mr. Justice Kennedy and a special jury in the King's Bench Division on Monday and Tuesday last. Mr. T. J. Stacey of Caversham, who grows Cucumbers on a large scale, bought from Mr. W. Bull, King's Road, Chelsea, 1000 seeds, which it was specified should be of the true Rochford Market variety. They were sown, and in due time produced fruit, when, instead of the desired Rochford Market variety, the bulk of the fruits showed clearly that they were nothing more or less than those of Telegraphs. They were described as "a mongrel lot." Telegraph Cucumber was one of the parents (seemingly prepotent) of Rochford Market. The grower now asked for some compensation for this result. Many experts were called on both sides. The case ended in favour of plaintiff, the judge awarding £75 as compensation.

Weather in London.—After twenty-one days of drought and great heat, with three cool days intervening, the elements entertained London on Thursday, July 25th, to a rousing thunderstorm that lasted without abatement for three hours, and rumbled about the horizon for two hours more. While the storm was at its worst (or at its best, as enthusiasts might say) the whole artillery of the heavens got into action. The thunder did not boom, or peal, or clap. It broke overhead in a series of crashes that shook the walls of houses and made the firm-set earth vibrate. Scarcely had the echo of one roar died away when a flash of fire split the air for another. The lightning was blinding in its vividness; flashes, sheet, and forked, following each other at the rate of a dozen or more to the minute, while the performance was in full swing. Viewed from the top storeys of City buildings, wrote the weather scribe of the "Daily Express," the play of the fire was a delight to see. The zig-zag flashes seamed the leaden sky as with red wire, and the quickness of the eye discerned the irregular form, bluish colour, and direction of the fluid. At intervals the flashes came so close upon each other that they couldn't be counted. To the unscientific observer the lightning appeared to have an upward, instead of an earthward, tendency. Throughout the storm it rained hard, not so much laying the dust as washing it away in yellowing street rivulets. It was a veritable deluge. Within the space of five hours the official pluviometer at Westminster measured 1.98 inch, practically 2 inches. This is almost a phenomenal fall. The town presented a desolate rain-swept appearance, and thousands of pedestrians, unprovided with waterproofs or umbrellas, got miserably drenched. It rained again heavily on Friday.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
July.										
Sunday .. 21	S.E.	deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Monday .. 22	W.N.W.	72.6	61.4	85.3	58.5	—	70.5	65.5	59.7	48.8
Tuesday .. 23	W.S.W.	66.9	60.8	74.3	62.1	0.04	70.7	65.9	59.9	58.0
Wednesday 24	S.S.E.	57.8	56.8	65.9	52.8	0.03	67.8	65.7	60.1	43.5
Thursday 25	W.S.W.	60.1	57.9	68.0	54.0	0.19	64.7	64.7	60.3	47.5
Friday .. 26	S.W.	64.9	59.8	69.7	54.5	0.18	64.0	63.7	60.3	48.2
Saturday 27	S.W.	61.7	58.4	62.2	54.2	0.40	63.7	63.3	60.1	50.8
		58.8	57.9	68.0	56.3	0.66	63.2	62.8	60.1	56.1
MEANS ..		63.3	59.0	70.5	56.1	Total 1.50	66.4	64.5	60.1	50.4

A great change in the weather has taken place during the past week, and the temperature is much lower. Rain has fallen on six days to the extent of an inch and a half. The rainfall for the month to date is 1.70 inch. The rainfall for the whole of July, 1900, was 1.11 inch.

Hardy Flower Notes.

THERE are some brave flowers, some that look dauntless and happy through all weathers, and flourish their blooms bravely through sunshine and storm, through soft breezes and through stiff gales. They are worth looking out for and worth cherishing, for they are like true friends, who will stand by us not only in our cheerful but in our heartless days. They are none too plentiful these precious things, and we might do worse than look back over the dry time we have passed through since last I wrote these notes, and pick from among the flowers of the garden those which have best stood the stress of the scorching suns and the drying winds. This, too, in "a dry parched land," where water is scarce, and has to be pumped by hand, no light task, as my factotum would tell you if you asked him how many cansful of water he had applied to the flowers on any given night, and he is not so liberal in his views on watering as I am myself. But enough of this, and to the flowers themselves.

No plant looks as if it enjoyed the warm weather and the dry time better than that rambling assertive *Coronilla varia*. It has spread apace, and from its duty of covering in summer a small bed of the noble Darwin Tulips, which are grand as garden flowers, it has thought fit to spread to other things, and now forms a big sheet of pink and white blooms and pretty leaves, straying among the bushes and invading little alleys among some flowers on trial. It is pretty too, and but for its overflowing luxuriance of growth would be more highly prized. Someone should plant it on the brow of a steep dry bank, and let it hang down and make a sheet of soft pink, which would be the effect it would present a little away. It varies a little from seeds, but this is the easiest way of raising a stock, and the best way of establishing it in a garden. A flower which blooms from June until about November is not to be lightly looked upon, even if not free from faults of its own.

Then we have had in that giant-headed Clover, *Trifolium pannonicum*, another thing which has appeared to enjoy the heat and drought, although on a dry and sunny rockery, where it looks fully better than in the border. From 2 to 2½ feet high, and covered with great heads of conical creamy-yellow flowers, it always secures admirers, and, were it more easily divided, one would often be called upon to supply would-be growers with a piece for "friendship sake." It is, however, not a plant from which a little piece can be slipped readily, and even a trowel finds difficulty in dividing its hard base. *Trifolium pannonicum* is, all in all, a satisfactory plant, although I could not answer a friend whom I caught studying it intently, and who ended by asking if "it would make a good forage plant?" This threatened combination of the *dulce et utile* was beyond me to advise.

Alstroemerias have revelled everywhere in the strong sunshine and in the dryness of the atmosphere and soil. There are few more beautiful things in the hardy flower garden than these, though some of them are strangely fastidious in establishing themselves in only certain parts of a garden. None I know are so easily grown as *A. aurantiaca* and its varieties, and their only fault in some gardens is that they are hardly suitable for the mixed border, as they so soon grow into great clumps, and encroach upon the space of other flowers. They are worthy of a bed or a corner to themselves, where the glorious masses of bloom they produce can be well seen, and where one may go to "cut and come again."

Some of the *Helianthus*es, or Sunflowers, are rare hot weather plants, and those of the style of *H. rigidus* look as if they thoroughly enjoyed the heat and drought. In this respect the *rigidus* forms are better than those of the style of *H. multiflorus* or *H. decapetalus*, which often show, by dropping their lower leaves, that they dislike a long-continued spell of dry weather on light soil. But for that rampant, running habit, these *rigidus* forms of such beauty as *H. Miss Mellish* and *H. Daniel Dewar* would be far more useful than they are. Yet, who could do without them?

Erigeron speciosus superbus has been another good flower for the dry time. It has kept fresh and vigorous, and its pleasing—nay, delightful—purplish flowers have been long untarnished by the weather. No one sees this, the best of all the border *Erigerons*, without admiration, and it is pleasant when it has the weather which suits it best, when its flowers get no rain for days together, and thus retain much longer the freshness of their opening beauty. Delightful, too, have been the *Eryngiums*, whose steely blue or glaucous heads and stems have had a happy time, and have stood with undiminished charms for many days together. The noblest of all is *E. alpinum*, whose feathery bract-like blooms have had a long lease and are yet fresh and pleasing with their delicate tones of blue. *E. Oliverianum*, also, has been most pleasing, and the few others in the garden have not lost any of their former graces in one's eyes.

One has run on, and has left no space for the fine *Helenium pumilum magnificum*, a good dry weather flower for July; for the

pretty *Isatis glauca*; for the Pinks, which stand drought so well as a rule; or for the many of greater or of lesser worth, which in the same month have showed their delight in, or their endurance of, the hot time they have undergone. As this is written we are looking forward to the revival of their more suffering companions, and to enjoying their loveliness, which has been obscured or hindered for a time. For now the rain has come.—S. ARNOTT.

Figs Under Glass.

Trees in Pots for Early Forcing.

OF all the insect enemies of the Fig, red spider and scale hold front rank in malignity. Red spider must be subdued by forcible syringing at least once a day, in hot weather twice, directing the force of the water against the under side of the leaves; and if this is not sufficient an insecticide must be used, as it is important that the foliage be kept clean and perform its functions. Scale does not yield to water unless at a temperature of 130° to 135°, and if carefully applied does not injure the foliage. As a rule scale requires treatment with an insecticide, and so also does red spider in some cases. Nicotine compound diluted to a safe strength completely annihilates red spider, but leaves a taint on the fruit, therefore must not be used until this is gathered. For both red spider and scale soluble paraffin oil is effective. It is easily made by dissolving one part of softsoap in eight parts water by boiling, and then adding paraffin oil to any extent not greater than the amount of the dissolved soap and water, stirring well. For syringing use as much of the soluble paraffin as contain a wineglassful or 2 fluid ozs. of paraffin oil to 3 gallons of water, and for applying with a brush to scale on wood that amount to 1 gallon. It is best to use hot water for mixing, and apply when cooled to 90° to 100°, or to act promptly in bad cases at 130° to 135°.

To insure plenty of stored matter for sustaining the first crop Figs next season in its early stages, afford liquid manure to the roots, not to the extent of causing exuberance, but to insure a due supply of nourishment and the storing of assimilated matter in the wood. Pinching, with a view to induce a neat habit in young plants with fruitfulness, must be attended to, regulating the stopping by the vigour of the plants and varieties. Strong growing sorts will need to be more closely pinched than those of moderate growth, but in all cases avoid overcrowding the shoots, for fruitfulness is not so much dependent on ample foliage as on a legitimate proportion duly exposed to light. The trees must not be huddled together, but each have space essential to the proper development of the tree under all the light possible, and free ventilation to solidify the growth as it is made. For early forcing the small varieties Early Violet and St. John's, with Brown Turkey to follow, are suitable, giving good results in both first—the most important—and second crops.

Planted-out Trees.

The trees started about the new year have the second crop in an advanced state, and must have a final thinning, reserving those fruits near the base of the growths which finish better than those near the points. Thinning is of vital importance, because fruit-bearing is an exhausting process, and the first crop having to be borne on the young growths of the preceding year, that part must not be enfeebled by carrying a heavy load of fruit. First crops are the most valuable. Any cultivator can grow second crops, and the chief cause of the failure of the first crop is imperfect ripening of the wood. Nor must the energies of the trees be taxed too severely by the second crop if they are to afford fruit early next season. Attention must be regularly given to training and stopping the shoots, keeping the joints well exposed to the light. Train thinly, tie loosely, and leave plenty of space in the ligatures for the shoots to swell. Stop side shoots at the fifth leaf, and rub off those not required, for spur growths to the extent of crowding are fatal to fruitfulness.

Water will be required copiously, applying a light mulching of short lumpy manure, sweetened horse droppings being suitable. If used fresh and too abundantly there is injury to the young growths. Such dressings admit air, and contain ammoniacal and other matter of great benefit to the trees. Liquid manure will be necessary according to the vigour of the trees and the extent of the rooting area. Trees in narrow borders may need it every day, others at longer intervals. They can hardly have too much water in hot weather, and they store more matter in a week of fine weather than in a month of dull. The border, however, must be of sound material, and the roots active. Forcibly dislodge red spider by syringing twice a day, which, with proper feeding, will occasion little need of insecticides. Scale must be removed with a brush and a soapy solution. Admit a little air constantly, increasing it early in the morning, and reducing the openings early in the afternoon, then affording plenty of moisture in the atmosphere, and allowing the heat to rise to 90° or more, and the fruit will swell to a good size; then a circulation of air constantly when the fruit commences ripening will enable the grower to produce Figs of the highest quality, which are wholesome and nutritious, and much appreciated at dessert.—PRACTICE.

Flowers under Difficulties.

As I walked last autumn through the tiny market place of the small town near where I have come to live, I was very much struck by the wonderful display of Mums in the parlour window adjoining the shop of the jeweller and watchmaker. They were very remarkable for their quality, variety, and size, so remarkable that I paused long before them. The grouping, too, was good, and the window gave me an immense amount of pleasure. The display was kept up for a long time. At first I was inclined to think the plants were bought, but the difficulty was, where from?

quantity of various Lobelias, and I do not know how many varieties of Sweet Peas planted out, Eckford's of course. I was quite lost among the multifarious treasures, all in the pink of perfection.

There was a propagating case at one end, and a lovely variety of *Troæolum* from New Zealand festooning the roof; cold frames outside full of Mums and "Calcies," herbaceous patch—you can hardly speak of a border in so small a space; a tiny lawn and standard Roses, with several good fruit trees, not an inch wasted. I tremble to think how they suffered so warm a summer. And this is not the work of a man of leisure. No; there is the shop. The gardener is his father's right-hand man, and we don't go in for early closing here. From his profession he is deft and neat. I am not neat in my own actions, and I do admire neatness in others. My friend finds



GROUPS AT SWEET PEA SHOW, ROYAL AQUARIUM.

(Mr. H. J. Jones, in front; Hobbies', Ltd., in extremity.)

I could not grasp the fact that they were reared on the premises, for just in that part of the town the shops are crowded together as closely as in Bond Street; where the back yards could be I could not tell, there seemed no space for even the sport of cat swinging. As the season advanced the Mums disappeared, only to have their places filled by Primulas, Narcissi, Spiræas, Tulips, and a host of pleasant spring flowers. Now there is a show of *Primula obconica* and Musk. I always scheme to pass that window, just for the sake of the bit of brightness, and I have found out the manufactory.

Behind the shop and house is a tiny garden facing south, and a beautiful little greenhouse as neat as a new pin, and full of nice things as ever it can hold. Of course there is that valiant soldier *Maréchal Niel*, the Arum "Lily," the tree *Carlaton*, the red *Salvia*, a lot of seedling *Pelargoniums* from Cannell's seeds, and some capital ones too, a

time to read at least three gardening papers a week. He is a musician too, although I don't suppose it is by his lute he charms weeds away. Like all true workers, there is not a grain of conceit about him; he is so willing to give you a hint or a plant or a cutting, and so obliged for a hint in return.

Just imagine what a charm this young man finds in a life that he is living to such good purpose. There is nothing more refining and elevating than the worship of Flora, and this is not half-hearted worship. He brings his best to her shrine, and is an ardent votary. I am not quite sure he arranges the plants in the window. There is a pretty sister in the background, and I always believe that woman is best at a colour scheme. Well, he is too good a brother to grudge a sister her morsel of credit. After all, if it were not for him, where would be the plants to arrange?—THE MISSUS.

Societies.

Royal Horticultural, Drill Hall, July 30th.

The special features at Tuesday exhibition in the Drill Hall were hardy plants from Messrs. Barr, Ware, Perry, Paul & Son, Wm. Paul and Son, and Wallace & Co. An exhibition of Gloxinias, which filled the entire space of a central stage, came from Messrs. Sutton & Sons. The plants were all from seeds sown last January, thus proving that the Gloxinia may be treated as an annual. They received an award of merit for this strain, which is seen to be very early flowering. The varieties illustrated an extraordinary variety of colour, the different shades being massed by themselves for effectiveness. The choicer named varieties noted by us were Her Majesty, the best white Gloxinia extant; Reading Scarlet, Azure Blue, Purple, Duchess of York, violet with lavender edge; Violet Queen, another pretty blue spotted variety, together with their other very handsome spotted hybrids.

The samples of tuberous Begonias staged in pots, and consisting wholly of double-flowered varieties from Messrs. Cannell & Sons, were very handsome for the lateness of the season, and received a silver-gilt Banksian medal. Mr. H. J. Jones arranged an effective group of stove and greenhouse flowering and foliage plants, including some good new Heliotropes (silver Banksian). Messrs. J. Peed & Son sent up a selection of Achimenes, among which Masterpiece, with rose purple flowers, was perhaps the finest. The Gooseberry collection from Messrs. Veitch furnished the *pièce de résistance*, and was perhaps as fine a selection of high quality fruits as this firm has ever staged. The varieties are discussed in a subsequent part of this report.

Water Lilies are becoming more and more numerous at Drill Hall shows, and on this occasion both Messrs. Barr and Amos Perry had beautiful cut flowers of these aquatics. The outstanding varieties of greater merit were *Marliacea rosea*, *M. albida*, *M. carnea odorata maxima*, *M. chromatella fulva*, and *Robinsoniana*.

Hollyhocks have been exceedingly fine this year, the dry summer having been much to their liking. Messrs. Webb & Brand from Saffron Walden brought forward a very attractive exhibit of these handsome border plants, some cut full length, or, again, cut blooms only; the varieties were varied, and as fine as we have seen (silver-gilt Banksian).

The best Phloxes on view, from Messrs. Wm. Paul & Son, were Coquelicot, orange-scarlet; Diamond, white; Le Siècle, bright rose pink; Etna, very much like Coquelicot; and Iris, deep violet purple, very rich and beautiful (silver Flora medal). We noticed the lovely *Romneya Conlteri* in Perry's group, accorded a silver-gilt Flora medal; it resembles a large single white *Pæonia* in flower, though in foliage and habit it is quite distinct.

Milla biflora from Messrs. Ware is not often seen, yet there are few more "taking" hardy flowers; the colour is pure white, and the form radiating and star-like.

The floral decorations by Miss Easterbrook, Fawkham, Kent, added quite a new feature to the Drill Hall, and her colour harmonies, nearly all in pink, were worthy of the highest praise (vote of thanks).

Mr. Arthur W. Wade, Riverside Nurseries, Colchester, showed Sweet Peas, and the new *Arctotis grandis*. Mr. Charles Turner staged a beautiful set of forty-eight Fancy Carnations and Picotees, including all the up-to-date varieties (silver Banksian medal).

The Floral Committee was forward in strength, and sat for a long while, the plants for certificates being numerous.

Floral Committee.

Present: Wm. Marshall, Esq. (in the chair); with Messrs. Chas. T. Drury, H. B. May, R. Dean, G. Reuthe, J. F. McLeod, James Walker, Chas. Dixon, R. C. Notcutt, H. J. Cutbush, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, J. H. Fitt, H. Turner, Geo. Paul, H. Selfe Leonard, E. T. Cook, Geo. Gordon, C. J. Salter, and Ed. Mawley.

Silver Banksian medals were awarded to Messrs. Wallace & Co., and to Mr. H. B. May, the former for Lilies and miscellaneous plants, and to the latter for Campanulas; and a silver-gilt Banksian to Messrs. Paul & Son for Roses and Phloxes.

Fruit and Vegetable Committee.

Present: George Bnyard, Esq. (in the chair); with Messrs. Jos. Cheal, S. Mortimer, Alex. Dean, Geo. Kelf, M. Gleeson, G. Norman, F. Q. Lane, A. H. Pearson, W. Wilks, E. Shaw Blaker, and Henry Esling.

The fruit and vegetable section of the meetings in the Drill Hall at this period of the year is not, as a rule, very large or important. There are, however, some exceptions, and the present was one of them, for Messrs. J. Veitch & Sons, Ltd., Chelsea, contributed from their Langley Nursery a magnificent collection of Gooseberries, with a few dishes of Black, Red, and White Currants. Some idea of the nature of exhibit may be gathered when the facts that many of the baskets in which the berries were shown had an inside diameter of 15 inches, that there were 100 distinct varieties, and that twenty-six cordons, each representing one variety, were staged. In every case the fruits were in splendid

condition, and the two-year-old cordons were beautifully cropped. The firm's three special varieties—Langley Beauty, medium to large, greenish yellow; Langley Gage, medium white, grand flavour; and Golden Gem, medium to large, very deep yellow, splendid flavour—were all staged. In the general collection the most noticeable were Leveller, Whitesmith, Trumpeter, Warrington, Whinham's Industry, Speedwell, Crown Bob, Keepsake, Lancashire Lad, Great Eastern, Alma, Lady Leicester, Pilot, California, My Beauty, Green London, Leader, Early Sulphur, Surprise, Stockwell, Railway, Telegraph, Dan's Mistake, Jenny Jones, Porcupine, Rumbullion, Champagne, Garibaldi, Gunner, Hedgehog, Rockwood, Crystal, Golden Drop, and Yellow Champagne. The Currants included—Black: Lee's Prolific and Black Grape; Red: La Versaillaise, Fay's Prolific, and La Hâtive; and White: White Dutch Cut-leaved, White Versailles, and Old White. It was a superb exhibit. The same firm also sent a box of the Loganberry (silver-gilt Knightian medal).

Messrs. Cross & Son, Wisbech, showed Apple Early Victoria; from the fruiting pieces staged it may be gathered that the variety is both early and prolific. Mr. T. R. Cuckney, Cobham Hall, Gravesend, sent fruits of a large round Gooseberry named Cobham Seedling; it is a dark greenish yellow variety; Miss F. S. Musgrave, Ardmore, Youghal, showed a dish of Cherry Raleigh. Mr. C. Dixon, gardener to the Earl of Ilchester, Holland House, Kensington, sent Melon Holland House, a cross from Belton and High Cross Hybrid. Mr. Dixon also sent a dish of Pear White Chissel.

Award of merit was given to Mr. M. de Luca, Blackford Lodge, Sunbridge Road, Bromley, for fruit in bottles.

The Orchid Committee met and signed the book, after which they rose.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, de B. Crawshay, H. M. Pollett, J. W. Odell, H. T. Pitt, E. Hill, W. Cobb, W. H. Young, T. W. Bond, H. J. Chapman, H. A. Tracy, F. Sander, and F. W. Moore.

The largest exhibit in the Orchid department was the group arranged by Messrs. J. Veitch & Sons, Ltd., Royal Exotic Nursery, Chelsea, and which comprised just one dozen plants, almost the whole being *Lælio-Cattleyas*. There were *L.-C. callistoglossa*, *L.-C. Ascania*, *L.-C. Clonia*, *L.-C. Duvaliana*, with some splendid plants of the handsome *L.-C. callistoglossa ignescens*. The only other example was of *Cattleya Atalanta*. Mr. E. Shill, gardener to G. W. Law Schofield, Esq., New Hall, H. v., Rawtenstall, staged *Cypripedium Mandiæ magnificum* and a seedling *Cypripedium Statterianum* (silver Flora medal).

Mr. W. H. Young, Orchid grower to Sir Frederick Wigan, Bart. Clare Lawn, East Sheen, contributed a small group of cut Orchids, including *Cypripedium nivenm*, *C. concolor*, and *C. Godfroyæ*; *Cattleya Whitei*, *C. atalanta*, *C. W. F. Wigan*, *C. porphyrophlebia*; *Lælio-Cattleya Henry Greenwood*, and a charming form of *Cattleya gigas*. Mr. J. Duncan, gardener to C. J. Lucas, Esq., Warnham Court, Horsham, sent plants of the handsome *Cypripedium warnhamensis*; Mr. W. Murray, gardener to Norman C. Cookson, Esq., Wylam-on-Tyne, sent *Cypripedium Argo-Rothschildianum*, it being a hybrid from the parents named in the specific name.

Certificates and Awards of Merit.

Bottled Fruit (M. de Luca).—Bottled in patent screw-stoppered bottles, the fruits were in splendid condition, and fine colour (award of merit).

Carnation Chas. Martel (C. Turner).—A yellow ground of good form; the profuse markings are bright scarlet (award of merit).

Carnation Heroine (C. Turner).—A good Fancy. The ground colour is pale lemon, and the markings rose and crimson (award of merit).

Carnation Lady Bristol (C. Turner).—A yellow ground with splendid petals; the markings are rich rose (award of merit).

Carnation Wasp (C. Turner).—A yellow ground Picotee with a rose-wire edge (award of merit).

Cypripedium Argo-Rothschildianum (W. Murray).—The dorsal sepal of this hybrid is pale yellow almost covered with varnished brown lines; the drooping petals are of similar shade; the pouch is claret (award of merit).

Cypripedium Mandiæ magnificum (E. Shill).—A superb form. The dorsal sepal is of large size, and of the purest white with green lines (first-class certificate).

Gypsophila paniculata fl.-pl. (D. S. Thomson & Sons).—The flowers of this plant are quite double, and pure white; it is of a graceful habit, and will be welcomed by many (award of merit).

Gooseberry Cobham Seedling (T. R. Cuckney).—A large round fruit of a deep greenish yellow colour; the flavour is very good (award of merit).

Montbretia Germania (Paul & Son).—Has flowers about 3 inches across, petals recurving; colour orange-scarlet on tall stems (award of merit).

Rosa polyantha Eugénie Lamesche (Paul & Son).—In trusses of numerous small flowers, which last well; the colour is a very pretty creamy yellow, darker in the centre; a good variety (award of merit).

National Sweet Pea, July 25th and 26th.

It was unfortunate that the first exhibition held by this recently constituted society should have been somewhat blighted by the severe London thunderstorm on Thursday last, and about which so much has been published. The dirt-begrimed roof of the Royal Aquarium, Westminster, where the show was held, is very leaky, and before the rain had poured many minutes the whole interior of the building was bespattered with dirty daubs of water. Many of the tables, at first covered with immaculate white paper, and bearing the beautiful Sweet Peas, were soon "inked over," and not a few of the bunches were rendered useless for further exhibition purposes. On Friday morning it again rained heavily. The Aquarium was well filled with exhibits, and on this point the show was quite successful. At the north end were two gold medal groups, one from Mr. H. J. Jones of Ryecroft Nursery, Lewisham; and another from Hobbies, Limited (Mr. John Green), Norfolk Nurseries, Dereham. Mr. Jones' group consisted of masses of all the leading Sweet Peas, with a central group of Cannas, including the new Miss Kate Gray (award of merit), one of the finest of all Cannas, and behind them some exceedingly handsome and elegant silvery flowered Humeas, with a background of deep green Phyllostachys, which can be seen in our illustration on page 107. The front edging is of *Scirpus (Isolopis) gracilis*. Hobbies' group was entirely of Sweet Peas, shown in many minor groups, each representing an individual variety, and relieved on all sides by green Ferns, which may also be viewed on page 107. A very representative selection of the newest and best Sweet Peas was arranged, each being massed in its own colour for effectiveness. Both groups were of a most satisfactory and pleasing character, the flowers themselves being large and strong. Hobbies also showed cut Tea Roses, Dahlias, and a grand bank of Crimson Rambler flowers.

Messrs. H. Cannell & Sons, Swanley, were also awarded a gold medal, as were Messrs. Dobbie & Co., from Rothesay. Besides these exhibitors, who, by the way, arranged very large groups, other arrangements were sent by Messrs. Harrison & Sons, Leicester, with sixty varieties, obtaining a silver-gilt medal; E. W. King & Co., Coggeshall, Essex, silver medal; Thos. Cripps & Sons, Tunbridge Wells, with *Retinospora obtusa* Crippsi, which received a first-class certificate. Mr. Robert Sydenham, Birmingham, as was to be expected, staged a goodly selection of varieties in vases, over a dark-green cloth; white cloth or paper would have shown up the Peas better. His varieties included Hon. F. Bouverie, Gorgeous, George Gordon, red; Mars, Sadie Burpee, and, indeed, all the best kinds. A silver-gilt medal was awarded to him; and also to a group sent by Messrs. Hurst and Son, from the Kelvedon trial grounds. Mr. Leonard Brown, Brentwood, staged bunches set in a wire construction with Asparagus woven between. It was the reverse to beautiful.

We must not overlook Mr. Henry Eckford's very lovely collection set up in long glass vases over a white paper grounding, and allowed plenty of space between each of them. There must have been between sixty and seventy varieties, and the pick of them were Lady Mary Currie, Countess of Powis, Black Knight, Countess of Radnor, Salopian, Miss Willmott, Duchess of Westminster, Royal Rose, Gorgeous, Mars, Captivation, Fascination, Blanche Burpee, Mrs. Dugdale, Colonelist, Peach Blossom, Countess Cadogan, Coccinea, Apple Blossom, Lord Kenyon, Hon. F. Bouverie, Countess of Shrewsbury, Countess of Lathom, Sadie Burpee, Little Dorrit, Monarch, Princess of Wales, Triumph, and Prima Donna. This magnificent selection filled the whole of a large table on either side, and received the award of a gold medal.

Messrs. J. Peed & Son's group (of which an illustration is furnished on page 103) was a blaze of colour. They staged a large amount of Peas, Carnations, Phloxes, Yuccas, Eryngiums, and other seasonable hardy flowers, and the painstaking arrangement deserves notice. (Silver-gilt medal.)

There was only one new variety certificated (F.C.C.), but this was worth a host. Everybody was most highly delighted with it, yet it runs away altogether from the smooth, rounded form of the florists' Sweet Pea. The petals are delightfully wavy, and of a most pleasing bright rose-pink colour. The blooms, individually, are large, and we noticed four on one truss, though three was most general. It was named Countess Spencer (what a lot of Countesses there are!) and was exhibited by Mr. Silas Cole, gardener to the Right Hon. Earl Spencer, Althorpe Park, Northampton.

Messrs. Dobbie & Co., Rothesay, N.B., set up a group of very strong Sweet Peas, the effect of which may be judged from the illustration on page 111. The group received the high award of a gold medal. Every variety worth growing was included.

The first class in the schedule asked for thirty-six bunches, distinct, and here the first prize was secured by Mr. W. Simpson, gardener to R. C. Foster, Esq., J.P., The Grange, Sutton, Surrey. There were three other competitors. The first prize collection included Queen Victoria, Gorgeous, Lady Grizel Hamilton, Mrs. Dugdale, Lemon Queen, Lottie Henderson, Captain of the Blues, Othello, Countess of Powis, Prince Edward of York, Emily Henderson, Dorothy Tennant, Lady Skermsdale, Triumph, Chancellor, Lady Mary Currie, Duke of Westminster, Fashion, Blanche Burpee, Senator, Little Dorrit, Hon. F. Bouverie, Lord Kenyon, Black Knight, Miss Willmott, Venus, Lottie Eckford, Royal Rose, Salopian, Countess of Radnor, Countess of Shrewsbury, Aurora, and

Prince of Wales. Mr. Robert Bolton, Warton, Carnforth, came second; and Messrs. Jones & Sons, Shrewsbury, third.

The order for two dozen distinct varieties in bunches, Mr. F. J. Clark, gardener to Mark Firth, Esq., Wistow Hall, Leicester, led with strong blooms, nicely arranged in vases with Grasses and Gypsophila; Messrs. Jones & Sons were second; and third Mr. C. Osman, South Metropolitan District School, Sutton. Messrs. Jones & Sons, Cotton Hill Nursery, Shrewsbury, were foremost for a dozen bunches with Mrs. E. Kenyon, Miss Willmott, Lady Nina Balfour, Gorgeous, Prince of Wales, Shazada, Duchess of Sutherland, Mrs. Eckford, Miss Emily Eckford, and Little Dorrit. For six bunches Mr. F. J. Clark carried off the first award with Emily Henderson, Salopian, Lady Mary Currie, Countess of Radnor, Navy Blue, and Prince of Wales; Mr. Robt. Bolton was second. Mr. S. Cole, Althorpe Park, led for six bunches in three varieties with Gaiety, Miss Willmott, and Hon. Mrs. E. Kenyon.

TWO VARIETIES OF ONE COLOUR.—Rev. L. Knights Smith, Brightstone, Isle of Wight, had the bulk of the first prizes in the classes. For the best whites he staged and won with Blanche Burpee and Sadie Burpee; Messrs. Jones & Sons coming second. For scarlet or crimsons he had coccinea and Sunproof; and for yellow or buff varieties he set up Hon. Mrs. E. Kenyon and Lady M. Ormesby Gore. The finest pinks also came from him, these being Countess of Lathom and Prima Donna. Messrs. Jones of Shrewsbury won for rose-coloured varieties with Mrs. Dugdale and Prince Edward of York; and also for the best mauves, these being Countess of Radnor and Duke of Westminster; and the best blues, to wit Navy Blue and Baden Powell. Mr. R. H. Jeffrey, Southampton, staged two handsomely striped vars., these being Princess of Wales and America.

Mr. R. Chamberlain, Cressingham Park Garden, won easily for two bunches of *Lathyrus latifolius*, the Everlasting Pea, he showing a few very beautiful and distinct varieties of undoubted merit. There were nineteen tables decorated with Sweet Peas in two classes, one having an entry of ten, the other just one less. These were more or less alike, though pink and scarlet varieties seemed to make the best show, especially when soft-coloured muslin was used beneath. One conspicuous example had a flat arrangement in which mauve alone was employed. Under certain lights it might have been effective, but not in the dim recesses of the Royal Aquarium. The principal prizewinners in the decorative classes were Messrs. Jones of Shrewsbury; Miss E. B. Cole, The Vineyard, Feltham; Messrs. E. S. Cole & Sons, Bath; Mr. Thomas Bolton, Coombe End, Kingston; and Miss Mary Anstey, 4, Knight Hill Road, W. Norwood. We expected to see some far more elaborate and beautiful designs, however, and the only thing that was really pleasing was a huge cross composed of white Sweet Peas beneath and a large bunch of scarlet Peas above the grounding. This was exhibited in class 19 by Messrs. Jones & Sons. At two o'clock a luncheon was given, when Mr. George Gordon, V.M.H., president, occupied the chair. He was supported by Messrs. N. N. Sherwood, R. Sydenham, J. Deal, S. B. Dicks, W. P. Wright, R. Dean (hon. executive secretary), A. Turner, Slough; H. J. Wright (hon. general secretary), C. H. Curtis, J. Fraser, R. Cannell, W. Logan, A. Hemsley, H. Thomas, Harrison Dick, and others. We are pleased to know that the Society is in a safe and prosperous condition, financially and otherwise.

Walsall Florists, July 22nd.

The twenty-second annual exhibition was held as usual in the public Arboretum on Monday, July 22nd. The arrangements were efficiently performed by the courteous and energetic secretary (Mr. C. M. Overton) and his committee. Entering the capacious "open class" marquee, the visitors were confronted by five groups of miscellaneous plants arranged for effect, and these reflected much credit upon the taste displayed by the competitors.

Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, Birmingham, again demonstrated his artistic ability by securing the premier prize with a *recherché* arrangement of such as Palms, *Arundinaria falcata*, *Codiaeums* (Crotons), richly coloured; *Caladiums*, Orchids in variety, *Humea elegans*, *Lilium longifolium*, *Ixoras*, *Francoas*, the charming and elegant *Amorgos Marjoram* (*Origanum Tourneforti*) (which, by the way, is also effectively used by Mr. Cypher of Cheltenham in grouping), including also the unique bright coral-red coloured *Fuchsia triphylla*. This *Fuchsia* possesses the faculty of flowering in small pots, and in this state it pleasingly associates with the pretty coral-berried plant *Nertera depressa*. In the order of merit Mr. W. Finch, Coventry, annexed the second prize with a bold and effective arrangement. The third prize was adjudged to Mr. Edward Clarke, St. Chads, Lichfield, whilst an extra prize was given to Mr. G. Hancox with a worthy arrangement.

Specimen stove and greenhouse plants were of a comparatively mediocre quality, excepting, perhaps, a very good plant of *Statice profusa* in the second prize collection of Mr. W. Finch, the first prize being awarded Mr. E. Clarke, Lichfield, for large specimens of *Bougainvillea glabra*, *Plumbago capensis*, *Allamanda Hendersonii*, *Begonia Wellsiana* (a large plant), *Impatiens Sultani*, and *Pandanus variegata*, brightly striped, and the third prize to Mr. E. Raffil.

Roses were a feature, as may be imagined, when it is remarked that such growers as Messrs. Perkins & Sons, Coventry, and Messrs. Townsend & Sons, Worcester, were the leading contestants. In the

class for forty-eight blooms the former firm staged a remarkably good lot of the leading varieties extant, thus securing the first prize. The second was given to the latter firm for an excellent complement. For twelve blooms Messrs. Perkins were again to the fore, and closely followed by Messrs. Townsend.

Carnations and Picotees also formed an attractive feature, some excellent blooms being shown. In the class for twelve blooms Mr. T. Ward annexed the first prize with Cardinal Wolsey (2), Miss A. Campbell (2), Mrs. Jas. Douglas, Golden Eagle, The Gift, Mrs. Eric Hambro (2), Voltaire, and Mrs. Tremayne. The second prize went to Mr. W. Pemberton, florist, Coalpool, Walsall, and the third Mr. T. Dolman. Cut herbaceous flowers were very well shown, and for a collection Mr. T. B. Grove, Wyld Green, Erdington, was awarded the premier prize for a well arranged assortment; second, Mr. W. Pemberton, and third Mr. A. F. Phillipson of Alderedge. Such as Stocks, Cactus Dahlias, Pansies, &c., were very well exhibited, both in the open and amateur classes. Sweet Peas were fairly good, and for the prizes offered by Mr. Robert Sydenham, Birmingham, Mr. W. Maple, Mr. J. W. Walls, and Mr. G. Faulkner were the respective winners.

A first-class certificate and silver medal was awarded to Councillor W. Waters, Acocks Green, for a meritorious collection of Violas consisting of about seventy varieties.

Fruit, though not extensive, was very creditably shown. For a collection of six dishes, Mr. George Hancox, West Bromwich, won with Gros Maroc Grapes, White Heart and Black Cherries, a Melon, Peaches, and Gooseberries, the second falling to Mr. Isaac Finley, and third Mr. H. D. Clarke. For two bunches of black Grapes Mr. A. D. Cozen and Mr. I. Finley were the winners as in order named.

Vegetables were capitally shown by several exhibitors in both classes (open and amateur). In the special classes Mr. J. W. Walls secured the first prize for a collection (offered by Messrs. Webb, Kinver); Mr. W. Pemberton and Mr. Hope-Fell the second and third prizes. For a collection of six distinct kinds, to be grown from seed supplied by Messrs. W. Pemberton & Son, the first prize was taken by Mr. A. E. Parson, second Mr. H. Cross, and third Mr. S. Heap. For a collection of six distinct kinds grown from seed supplied by Mr. T. W. Brooks, Walsall, the prizes were annexed by Messrs. Sborhouse, H. D. Clarke, and Hounslow, as in order named. The proceedings were enhanced by the sweet music discoursed by the Royal Marines Band (Portsmouth), glee singing, balloon ascents, fireworks, and other attractions for the delectation of the great crowd of visitors.

Farnborough Horticultural, July 24th.

This society held its sixth annual exhibition of flowers, fruit, and vegetables on Wednesday, 24th, in the beautiful park at Beechwood, by kind permission of Mrs. R. M. Fox. Mr. W. H. Morter, the indefatigable secretary, seemed in excellent spirits, thinking possibly of his fine garden at High Elms as well as the success of this show. The principal prizes, according to the schedule, were adjudged to the following by Mr. J. Lyne of Chislehurst, Mr. F. Dapper of Bromley, and Mr. J. Blackburn of Englefield Green. For the best kept and cropped allotment, not over 20 rods, T. Leach came first, with W. G. Brand and C. H. Beckley second and third. For ditto, cottagers' gardens, W. Cousins, C. Baker, and R. Mussell, in order. For best kept and cropped allotment, not exceeding 12 rods, in Farnborough village, T. Leach first, G. Leach second, and G. Dewbury third.

In the classes for vegetables coming from the cottagers of Green Street Green and Farnborough were very fine examples, and of good culture, in spite of the extreme drought, and required careful judging before prizes were affixed. The special prize was awarded to Mr. T. Leach, who had a very excellent basket. There were forty-seven bunches of Sweet Peas from children, and each child had to arrange the flowers at the show. No child went home without a prize, as the donor presented a consolation prize to each, as well as to the four successful ones. For wild flowers, Ferns, and Grasses came a number of entries in the childrens' classes, which goes a long way in teaching the craft to the young.

In the non-competitive groups Messrs. J. Veitch & Sons, Chelsea, and Mr. H. J. Jones, Lewisham, occupied the ends of the large tent, in which some well-flowered Cannas, Begonias, Carnations, were shown; in foliage plants Caladiums, Crotons, Dracenas, Alocasias, &c., were also good.

Mr. W. H. Morter, gardener to the Right Hon. Lord Avebury, had a magnificently arranged group, consisting of Caladiums, Crotons, Coleus, Acalyphas, various Lilliums, Cannas, &c., as also did Mr. F. London, gardener to Mrs. Thos. Fox, whose Campanula pyramidalis were very fine.

Mr. F. Francis, gardener to A. Good, Esq., grouped some well grown specimens of Coleus, Caladiums, Crotons, with a neat border of Adiantums dotted with Achimenes, Gloxinias, Streptocarpi, and Begonia Gloire de Lorraine. Messrs. Cannell & Sons' Cannas were exceedingly fine and well grouped; Messrs. J. Laing contributed a group of stove and greenhouse plants, including a box of cut Roses and the beautiful variegated Saxifrage; from Messrs. Dobbie & Co., Orpington, came Zinnias, Pentstemons, and Sweet Peas.

Mr. J. Dowler arranged in tiers about ninety varieties of Sweet

Peas, amongst which Lady G. Hamilton, Countess of Powis, Prince of Wales, and Her Majesty were very good; Mr. Dowler also sent a collection of fruit. The Horticultural College, Swanley, sent Melons, Grapes, Raspberries, Peaches, &c., and bottles of preserved fruit.

Southern Counties Carnation, July 24th.

The fourth annual exhibition was held in the Royal Pier Pavilion, Southampton, on Wednesday 24th inst. The entries were far more numerous than past years, being in fact a record since the Society's formation, while the quality was quite equal if not better than that of the National, held at the Crystal Palace the week before. The competition in most of the classes was exceptionally keen. From the number of local exhibits, and their success, it is evident that a great incentive has been given to the cultivation of Carnations and Picotees. There was also a grand display of Sweet Peas, prizes being given by Messrs. Toogood & Son, Southampton; Mr. R. Sydenham, Birmingham, and Messrs. B. Ladhams, Shirley Nurseries. The exhibits were staged on five long tables, extending the whole length of the Pavilion; at the entrance Messrs. Rogers & Son, Ltd., Red Lodge Nursery, had a fine group of miscellaneous plants, while in front of orchestra (which was occupied by Mr. E. Jones's string band) groups were arranged with good effect from Messrs. Toogood & Son, B. Ladhams, E. Wells, and W. Garton, jun., the hon. sec. and treasurer of the society. Mr. W. Garton, sen., also contributed a very nice lot of effective plants for decorative purposes. The weather, which was very stormy in the morning, cleared up in the afternoon, and a very large number of people visited the show. In the cup competition W. F. Flight, Esq., Twyford, Winchester, was the successful exhibitor; this being the second year in succession that Mr. Flight has been the winner, it now becomes his property, and his gardener, Mr. Neville, is to be congratulated on his success. The judges were, for bizarres, flakes, and white ground Picotees, Messrs. J. Ball and T. E. Henwood; for self yellow grounds, cup competition bouquets, table decorations, sprays, buttonholes, and vases, Messrs. James Douglas and Charles Blick. Following is a list of their awards—viz.,

Carnations, flakes and bizarres, twelve blooms: First, Mr. F. Wellesley, Westfield, Woking, with Gordon Lewis, Thalia, J. S. Hedderley, Skirving, Sportsman, Master Fred Melville, Arline, G. Merton, Rob Lord, Rob Houlgrave, and J. D. Axtal; second, Messrs. Pemberton and Sons; third, Mr. M. R. Smith; fourth, Messrs. Thompson & Co.; fifth, Mr. A. Brown; sixth, Mr. R. Sydenham. Six blooms: First, Messrs. F. W. Goodfellow; second, Mr. R. C. Cartwright; third, Mr. J. J. Keen; fourth, Mr. G. Chaundy; fifth, Mr. A. J. Rowberry; sixth, Mr. C. W. Gater. White ground Picotees, twelve blooms: First, Messrs. Pemberton & Sons; second, Mr. R. C. Cartwright; third, Mr. A. Brown; fourth, Mr. F. Wellesley; fifth, Mr. R. Sydenham; sixth, Messrs. Thompson & Co. Six blooms: First, Mr. W. F. Goodfellow; second, Mr. J. J. Keen; third, Mr. G. Chaundy; fourth, Mr. J. E. Tuplin; fifth, Mr. E. J. Wootten; sixth, Mr. A. J. Rowberry. Yellow ground Picotees: First, Mr. Martin R. Smith; second, Mr. F. A. Wellesley; third, Mr. S. A. Went; fourth, Mr. C. Turner; fifth, Messrs. Thompson & Co.; sixth, Mr. J. Walker. Six blooms ditto: First, Mr. R. C. Cartwright; second, Mr. A. R. Brown; third, Mr. A. J. Rowberry; fourth, Mr. E. H. Buckland; fifth, Mr. J. E. Tuplin; sixth, Mr. E. J. Wootten. Yellow grounds and Fancy Carnations: First, Mr. M. R. Smith; second, Mr. F. A. Wellesley; third, Messrs. Thompson & Co.; fourth, Mr. C. Turner; fifth, Mr. A. R. Brown; sixth, Mrs. Brookes Smith. Six ditto: First, Mr. R. C. Cartwright; second, Mr. E. H. Buckland; third, Mr. J. E. Tuplin; fourth, Mr. F. W. Flight; fifth, Mr. A. J. Rowberry; sixth, Mr. E. J. Wootten. Self: First, Mr. M. R. Smith; second, Mr. R. C. Cartwright; third, Messrs. Thompson & Co.; fourth, Mr. F. A. Wellesley; fifth, Mr. A. R. Brown; sixth, Mr. S. A. Went. Six ditto: First, Mr. A. J. Rowberry; second, Mr. F. W. Flight; third, Mr. E. J. Wootten; fourth, Mr. J. E. Tuplin; fifth, Messrs. Pemberton & Sons; sixth, Mr. E. H. Buckland. Single blooms, scarlet: First, Mr. J. J. Keen; second, Messrs. Pemberton; third, Mr. J. J. Keen. Crimson: First, Messrs. Pemberton; second, Mr. F. A. Wellesley; third, Mr. M. R. Smith. Pink: First, Mr. M. R. Smith; second, Messrs. Pemberton; third, Messrs. Thompson. Purple flake: First and second, Mr. F. A. Wellesley; third, Mr. A. E. Brown. Premier Carnation, Gordon Lewis: won by Mr. F. A. Wellesley. Fancy, Queen Bess: Mr. F. A. Wellesley. Self: Mr. F. W. Goodfellow. Premier Picotee, white ground: Pride of Leyton; Mr. F. A. Wellesley; yellow ground: Childe Harold, Mr. M. R. Smith. Table decorations: First, Miss Tyrell; second, Mr. E. Carr; third, Miss E. Burd. Bouquets: First, Mr. E. Wills; second, Mr. B. Ladhams; third, Mr. E. J. Wootten. Sprays: First, Mr. J. Newman; second, Mr. E. Carr; third, Mr. E. J. Wootten; fourth, Mr. B. Ladhams. Buttonholes: First, Mr. J. Newman; second, Mr. E. Wills; third, Mr. R. C. Cartwright; fourth, Mr. B. Ladhams. Vases: First, Mr. E. J. Wootten; second, Mr. E. Carr; third, Mr. R. H. Jefferys; fourth, Mr. A. Martin. Sweet Peas, Toogood's prizes: First, Mr. R. H. Jefferys; second, Mr. A. Maple; third, Mr. G. Stubbington. Mr. B. Ladhams' prizes: First, Miss Snelgrove; second, Mrs. E. M. Burnett; third, Mr. E. Carr. Mr. R. Sydenham's prizes: First, Miss E. Smith; second, Mr. R. H. Jefferys; third, Mr. A. Maple. Certificate was awarded to Mr. F. W. Flight for a very fine light pink self named Mrs. Flight, and to Mr. W. Garton, jun., for a yellow ground Fancy named Miss Sheila Garton.—J. M.

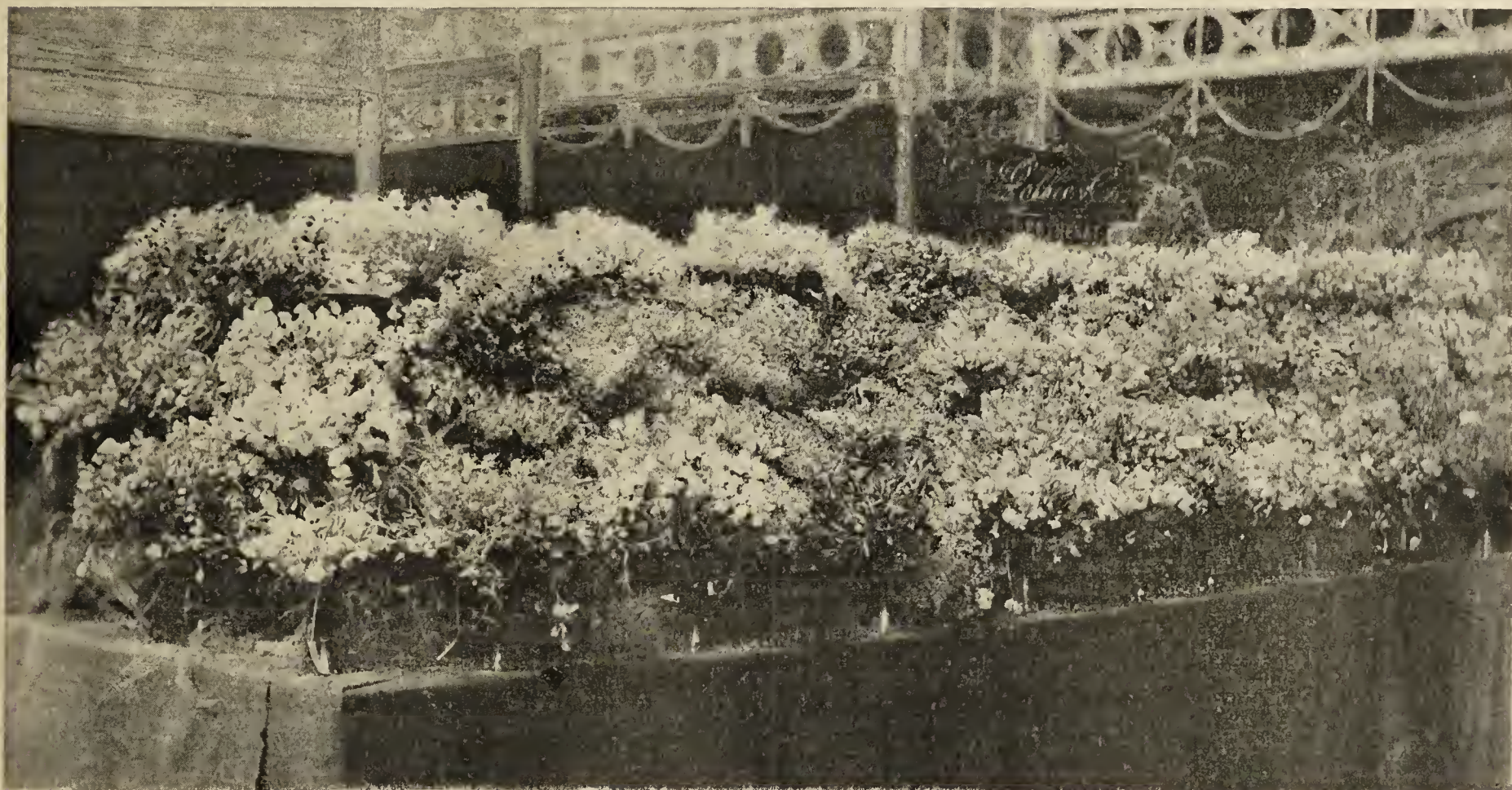
Nottingham Horticultural, July 24th and 25th.

The Notts Horticultural and Botanical Society held their annual exhibition and garden party on the 24th and 25th July, in the Arboretum, under the patronage of the Mayor, Sheriff, and Corporation, and the leading horticulturists of the county, with the Duke of Portland as president. It was, without a dissenting voice, pronounced to be the finest exhibition, taken as a whole, of plants, flowers, fruit and vegetables that the society has held. Its success was marred, by reason of the heavy and continuous rain of both days, and a heavy financial loss will result to the society. It was a pity, as far as the show was concerned, that the drought should break up just at that time, and that the much-needed rain, which was gladdening the hearts of all gardeners and husbandmen, should bring to the officers of the society such saddening experiences.

The decorative side of the show was its great feature, the groups of plants, specimen plants, Roses, and other cut flowers being of the highest quality. The first prize group, on a 200-feet space, was a model group, well grown plants most artistically arranged. They worthily won the £10 prize and the silver cup offered by Lord Henry Bentinck, M.P. for South Nottingham. The winner was the gardener to Mr. G. H.

box of Caroline Testout, each and all fully maintained their reputations, and some of them were the recipients of gold medals. H. Low & Co., Enfield; S. Harvey, Nottingham; J. H. White, Worcester; W. L. Pattison, Shrewsbury; Hinton Bros., Warwick; Dicksons, Chester; and C. J. Mee, Nottingham, for a group of greenhouse plants. One feature of the Nottingham exhibition is a class for decorated fireplaces, or, as it is described in the schedule, "The best floral decorated fireplace and mantleself; a sham fireplace and mantleself, with mirror at the back, will be provided, and 2 feet space in front allowed; drapery may be used to cover the woodwork." Three or four were so decorated with really delightful effect, showing most exquisite taste in disposing of both plants and drapery. This is quite a feminine class, and is much appreciated.

The show was opened by his Worship the Mayor in a very sympathetic, appreciative, and encouraging speech. At the close the Mayoress was presented with a lovely bouquet by Miss Edna Mee, the daughter of the secretary. At the luncheon in the refreshment rooms, which was presided over by the chairman of committee, Mr. Councillor Charles Smith, the usual loyal and local toasts were proposed and responded to, and many words of encouragement were said to the officers on the adverse character of the weather and its depressing



MESSRS. DOBBIE'S GROUP AT SWEET PEA SHOW. (See Report.)

Turner of Derby. The secondary groups, on a 120-feet space, were also charmingly set up, and Mr. R. Halford secured the first prize of 4 guineas, and a silver cup, value 5 guineas, offered by the Mayor, Mr. Councillor F. R. Radford. Mr. W. Vause of Leamington swept the board of nearly all the first prizes for specimen and other plants, but the local rosarians and florists secured the best prizes for various artistic arrangements of Roses and other cut flowers, except in cut Roses, the best prizes in these being well won by the Messrs. Perkins of Coventry and Leamington. Bouquets were rather weakly represented.

Fruit was scarcely so well shown as usual. Mr. J. H. Goodacre, gardener to the Earl of Harrington, of Elvaston Castle, took the first prize for indoor grown fruit, and Mr. Read, gardener to the Earl of Carnarvon, of Brethby Park, the first for outdoor grown fruit, as also for Peaches and Nectarines. Mr. Read was very successful in the vegetable classes, as he took the first prize for nine varieties of vegetables, though he was followed very closely by Mr. Hudson of Leicester, as well as for Peas, Beans, Carrots, Leeks, and Onions. In some of the vegetable classes, the influence of the drought was clearly seen, notably in Potatoes and Turnips, though Peas were splendidly shown generally. Trade exhibits were a grand feature, and Messrs. Dicksons of Chester, White of Worcester, Deverell of Banbury, with herbaceous plants, Carnations, &c.; Hinton of Warwick, with Sweet Peas and Carnations; Pattison of Shrewsbury, with Violas and Carnations; Hugh Low & Co. of Enfield, with Orchids and Epacris; Harvey of Nottingham, with Begonias, single and double; William Lowe, Rose Nurseries, Beeston, with cut Roses, especially a splendid

influence and effects. The judges were: Mr. Roberts of Welbeck Abbey, Mr. Edmonds of Bestwood Lodge, McVinish of Beaumanor Park, Anderson of Clifton Hall, Webb of Kelham Hall, Pownall of Lenton Hall, and Parr of Holme Pierrepont. The secretary and officers worked hard to make the show a success, and only the rain interfered to prevent it.

Leamington Spa, July 24th and 25th

This pretty town, which may be aptly termed the "queen of the Midlands," years ago held an annual summer show, which, like many others in various parts of the country, was discontinued through lack of funds. Mr. C. S. Birch, an enterprising resident, has this year made a determined attempt to establish another horticultural society on a firm basis. It is therefore greatly to be regretted that after a long period of drought the weather should have been wet on each day of the show. It is to be hoped, however, that the energetic promoter and his painstaking committee will press onward in their endeavour to establish a show second to none in the county. C. A. Smith-Ryland, Esq., one of the most generous supporters of horticulture in Warwickshire, opened the show, which was held in the well known Jephson Gardens, which, thanks to Mr. Dell, the superintendent, were in the best of condition. The great feature of the show was undoubtedly the groups of plants, each to occupy a space not exceeding 150 square feet, but bouquets, cut flowers, and non-competitive collections of fruit were also well shown. All the arrangements were carried out in a thoroughly business-like manner by Mr. A. J. Nichols, the popular secretary.

The Leamington Nurserymen and Florists', Ltd. (manager, Mr. Harper) won the £10 offered as the first prize for a group of plants, quality and effect to be the leading features. In this exhibit there was a variety of choice materials, plenty of colour, and good taste and finish in the arrangement. In the centre a large and shapely *Cocos Weddelliana* was elevated on a pyramid formed of cork, the latter being tastefully draped with creepers, and dotted here and there with *Ochids*, *Codiaeums* (*Crotons*), and other plants. Pedestals topped with well-coloured *Codiaeums* were also arranged on either side. Mounds were formed at the corners, and surrounded with light feathery Palms. The groundwork was formed of moss, from which sprung many attractive plants, while others were elevated on small pedestals, and in the foreground well-flowered plants of *Epidendrum vitellinum majus* were conspicuously displayed. Mr. Vause, Leamington, was second. In this group a four-cornered arch formed the centre; this was topped by a spreading *Kentia*, the sides of the arches being dressed with creepers, *Odontoglossums*, Ivy-leaved *Geraniums*, and other suitable plants. Beneath the arch a highly coloured but rather large *Codiaeum* was arranged. Mounds at the corners and at other conspicuous places rise from a groundwork of moss. The idea was a good one, and if a little more time had been bestowed in giving finishing touches here and there it would have run the premier group closer than it did. Mr. Finch, Coventry, was a good third. In his group a beautiful and lightly arranged mound, topped by a *Phoenix*, formed a fine centre. The corner mounds were also well arranged, and the groundwork throughout was well finished, but as a whole it needed more colour, and choicer materials at various points, to give it that amount of attractiveness which we often see in this veteran exhibitor's groups.

For six stove and greenhouse plants, distinct, prizes of £6, £4, and £2 were offered. Mr. Vause won with good specimens of *Allamandas*, *Ixoras*, *Stephanotis*, and a fine *Cycas revoluta*; Mr. Finch, Coventry, being second. Mr. Vause again won for one specimen plant in bloom with a fine *Ixora*, Mr. Finch being second with a beautiful flowered *Stephanotis*, and the Leamington Nurserymen, Ltd., third. For one specimen foliage plant Mr. Finch won with a grand *Cycas*, Mr. Vause being second with a fine *Codiaeum Warreni*, and the Leamington Nurserymen, Ltd., with a large *Kentia*.

CUT FLOWERS.—Messrs. Perkins & Sons, Coventry, were first for twelve Tea Roses, and also for a similar number of H.P.'s; being followed in each case by the Leamington Nurserymen, Ltd., and Mr. Vause in the order named. For the best arrangement of Sweet Peas, to cover a space not exceeding 6 feet by 3 feet, Mr. H. Liney, gardener to W. Low, Esq., Wellesbourne House, Warwick, received the first prize. He staged good flowers of choice varieties in a most pleasing style. Messrs. Perkins & Sons, Coventry, won for a hand bouquet, and also for a basket of flowers. In each case the finish and blending of colours was executed in their usual noteworthy style. The Leamington Nurserymen, Ltd., also exhibited a beautiful basket, angled with *Odontoglossums*, *Cattleyas*, and *Asparagus*, and were awarded the second prize; and Mr. Vause was third. The Leamington Nurserymen, Ltd., were second for a hand bouquet. Mr. Vause secured a good win by occupying the post of honour for dinner table decorations with an arrangement of Raby Castle Carnations, associated with Ferns and trailing shoots of *Lycopodiums*; the Leamington Nurserymen, Ltd., being second, and Messrs. Thornton & Sons third.

FRUIT.—Mr. H. Liney was first for black Grapes with well coloured examples of Black Hamburgh. The same exhibitor won for a dish of Nectarines. For two dishes of Gooseberries Mr. W. Wright, gardener to Mr. Lucas, was first, and Mr. W. Draper, gardener to R. C. Milne, Esq., staged the best Tomatoes, a grand dish of Perfection.

NON-COMPETITIVE EXHIBITS.—Mr. Martin, gardener to Lord Leigh, The Gardens, Stoneleigh Abbey, Kenilworth, staged an excellent collection of fruit and plants in a most attractive manner, and was awarded a certificate of merit. Similar awards were also given to Mr. Crump, Leamington, and Mr. Wagstaff, Leamington, for attractive collections of fruit. Hinton Bros., Warwick, were awarded a certificate of merit for a highly meritorious collection of Sweet Peas, and similar awards went to Deverill, Banbury, Perkins & Sons, Coventry, and the Leamington Nurserymen, Ltd., for collections of herbaceous plants.—H. D.

Huyton and Roby, July 25th.

Although very welcome for all kinds of crops, the rain was detrimental from a visitor's point of view, and the show, which was opened in the grounds of the Public Offices, must to some extent have suffered financially. In the absence of many of the larger stove and greenhouse plants, it must be admitted that never in the history of the society has such a beautiful and choice lot of greenhouse plants and cut flowers been seen, the centre of the large marquee being a blaze of varied colour, the display being much enhanced by the splendid circular group of *Campanulas* edged with Ferns, and placed, not for competition, by Messrs. R. P. Ker & Sons, Aigburth Nurseries. A sumptuous collection of the best named and grand own seedling Carnations was staged by Mr. C. A. Young, West Derby, whilst the Sweet Peas from Mr. Henry Middlehurst, and those together with the Roses from Messrs. Caldwell of Knutsford, were generally admired. The vicar of Roby, the Rev. S. A. K. Sylvester, accompanied by Mrs. Sylvester, opened the show and made one of his usual practical speeches. He rejoiced at the progress of the society, and hoped that the work of the cottagers would be even more advanced than at present.

PLANTS AND CUT FLOWERS.—For a group of miscellaneous foliage and flowering plants Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, showed excellent work, the quality of Carnations and abundance of well-flowered plants of *Oncidium Lanceanum* being very marked. A handsome second was put up by Mr. J. Hardcastle, gardener to T. T. Harding, Esq., Rydal House, Huyton. Mr. Lyon had *Oncidium Lanceanum* very fine as a single Orchid, also with good *Petunias* and four stove and greenhouse plants; Mr. E. Bridge, gardener to Mrs. Jowett, Greenhill, Huyton, second. *Statice profusa* was a splendid premier greenhouse plant staged by Mr. J. Watkin, gardener to T. D. Syers, Esq., Huyton, also with two capital *Lilium auratum*s, three magnificent double *Begonias*, and one in a pretty hanging basket. Mr. Bagnall, gardener to C. F. Boston, Esq., Charlwood House, Huyton, had three special single *Begonias*, and a huge pyramidal specimen came from Mr. Bridge.

The best *Caladiums* came from Mr. T. Eaton, gardener to J. Parrington, Esq., Roby Mount; Palms and Ferns were well grown by Mr. Hardcastle, and Mr. Bridge had three Zonal *Pelargoniums*. *Gloxinias* were a splendid feature all round, those put up by Mr. George Guy, gardener to Dr. Gaskell, Huyton, being perfect specimens in every respect. The prizes for table plants, *Fuchsias* (good), and foliage plants, went to Messrs. Little, gardener to G. H. Pilkington, Esq., Wheathill, Roby; J. George, gardener to T. Henshaw, Esq., Whitefield House, Roby; and J. Fairclough, gardener to J. Atherton, Esq., Hurst House, Huyton. Table decorations were not so pleasing as on former occasions, but the arrangement of colour was tasteful, Mrs. Middlehurst winning with manve Sweet Peas, pink Carnations, and dressings of *Smilax* and *Gypsophila*. A lovely epergne came from Miss M. G. Crippen, a bouquet from Mrs. L. P. Anderton, and a fine basket of Roses from Mrs. H. Middlehurst. Roses were not at all bad, the class for twelve being secured by Mr. Little, and the second by Mr. J. George. In the first stand *Marquise Litta*, *Caroline Testout*, and *La France* were good. For six Roses, distinct, and six of any variety, Mr. J. Burrows, gardener to W. H. Cook, Esq., Hawthorndale, Huyton, was in fine form; Mr. W. Gibbs, gardener to Mrs. Robinson, Church Road, Huyton, was an excellent second.

FRUIT.—For four dishes, two large bunches of *Madresfield Court* helped Mr. Fairclough immensely. The *Hamburghs* and *Bucklands* from Mr. Oldham, gardener to Joseph Beecham, Esq., Ewanville, Huyton, were of extra superiority. Peaches, Nectarines, and Strawberries from Mr. Eaton were unusually good, as was the hardy fruit from Mr. Little. A rich-looking *Melou* came from Mr. McKelvie, gardener to Jno. Stone, Esq., Blacklow House, Roby.

VEGETABLES.—Mr. Lyon had eight very select vegetables, three dishes of splendid Tomatoes, and the same number of Peas; and Mr. Little three dishes of Potatoes. Prizes for single dishes went to Messrs. Hardcastle, George, Burrows, and Little. Messrs. Daine, Woodfall Hall, Huyton, the well-known Potato specialists, had a collection embracing every up-to-date kind, and received a certificate. The Countess of Derby's prize was won by Mr. Amos Worrall, and Mrs. Parrington's by Mr. David Hunter. Messrs. W. H. Crook, the energetic chairman; C. Geddes, vice-chairman; T. D. Syers, treasurer; and H. Middlehurst, secretary, assisted materially to the success of the show.—R. P. R.

Handsworth Horticultural, July 26th and 27th.

The seventeenth annual exhibition was held in the Victoria Park, Handsworth, by permission of the District Council, on the 26th and 27th of July, under the presidency of Councillor A. Price. Owing to the reduced financial position of the society, chiefly accruing from the adverse state of the weather on the occasion of last year's show, the committee resolved to try and augment its resources on the present event by offering extra valuable prizes. They also invited Miss Marie Corelli to open the exhibition, and so far their anticipations were fully justified. Unfortunately late in the afternoon the show was visited by a terrific thunderstorm of hail and rain, inundating the inside of the marquees with pools of water. Fortunately the tents withstood the force of the storm without material damage, excepting one end of the large one containing the groups and specimen plants, which was blown in, but fortunately just missed falling upon Mr. Cypher's group for effect. Two or three collections of bunches of decorative Roses, however, did not escape so well, as they were blown on to the ground, but fortunately without material damage. One of the refreshment tents was completely destroyed, also the inflated large balloon, just prepared for an ascent.

Mr. Cypher of Cheltenham was an exhibitor of plants, and his charmingly elegant half-circle, 30 feet by 15 feet, "group for effect" was an easy first for the £15 prize. The second prize (£8) was annexed by Mr. W. Vause of Leamington, and the third to Mr. G. Hancox for a most creditable display. For twelve stove or greenhouse plants (first prize £15) Mr. Cypher was again to the fore. The second prize fell to Mr. Vause. Ferns were extensively shown, and collections of other plants by several exhibitors contributed to make up an extensive and attractive scene.

Roses were extensively and capitally staged by several exhibitors, and included collections from Mr. Hugh Dickson, Belfast, but which unfortunately arrived too late for judging; a special award, however, being granted them. For twenty-four varieties, distinct, first prize Messrs. Perkins & Sons, Coventry, the varieties being Mrs. John Laing,

Madame Eugène Verdier, Madame Verdier, Ulrich Brunner, Earl of Dufferin, Killarney, A. K. Williams, Captain Hayward, Marchioness of Dufferin, Duke of Albany, Prince Arthur, Beauty of Waltham, Rev. Alan Cheales, Black Prince, Gustave Piganeau, Louis Van Houtte, Suzanne M. Rodocanachi, Bessie Brown, Duke of Connaught, Osker Cordel, German Caillat, Horace Vernet, and Madame de Coubert. The second prize was taken by Mr. G. Prince, Longworth, Berks; and the third by Messrs. Townsend & Son, Worcester. For twelve bunches of garden or decorative Roses, distinct, the competition was keen, and Mr. Geo. Prince was the winner with Madame de Grotey, Grüss an Teplitz, W. A. Richardson, Crimson Rambler, Boule de Neige, &c.; the second honours being accorded Mr. John Mallet, Oxford.

Picotees were beautifully shown by Mr. A. R. Brown, Handsworth, he being first with a superb bloom of W. H. Johnson, having a very bright scarlet edge; also Miriam, Little Phil, fine; Brunette, Amy Robsart, Mrs. A. R. Brown, Pride of Leyton, Ganymede, Maud, Heart's Delight, and Elsie May. Second, Mr. Thomas Crisp. In the class for twelve Carnations Mr. Brown was an easy first with fine examples of The Briton, Bishop Ilsley, fine; Dick Donovan, Mrs. Arthur Gilbey, W. G. Gottwaltz, Hidalgo, Ossian, Dalgetty, The Khedive, Hubert Galton, very good; Swallow, and Cockatrice. In the lesser classes of Carnations and Picotees Mr. T. Crisp and Mr. Chatwin were the winners.

In the classes for gentlemen's gardeners, amateurs, and cottagers, there were numerous entries for flowers, fruits, and vegetables, also for groups of plants arranged for effect, ladies' dinner-table decorations, bouquets, epergnes, sprays, buttons, &c. Councillor W. Waters, Accocks Green, was distinguished by a fine collection of Viola blooms. The efficient arrangements were carried out under the superintendence of Mr. A. Attwooll, the chairman, and Mr. Joseph Beresford, the secretary.

Boston Horticultural, July 25th and 26th.

This is an old-established society, and on the above dates it held, in a field, in what is known as Wide Bargate, an exhibition generally considered to have been one of the best the society has ever held. In addition it is usual to have a horse show, with the accessories of jumping, &c., and a dog show was also held. It being market day, the town was full of agriculturists, and, despite the rain, a large number of country people came in, as the annual flower show is regarded as the district holiday. Both days, unfortunately, were very wet, and it is to be feared a financial loss has been experienced by the committee.

Plants are not usually a leading feature at Boston. The best group arranged for effect came from Mr. J. Thorns, Mr. W. Garfitt, M.P., being second, but both left something to be desired in the way of finish. Some fairly good specimens of Coleus, Ferns, and Fuchsias were staged. There were some excellent tuberous-rooted Begonias from Mr. J. Thorns, also good Gloxinias, with specimen stove and greenhouse plants, &c.

The most interesting feature of the show was the open classes for cut flowers. With twenty-four varieties of cut Roses Messrs. G. and W. Burch, Rose Nurseries, Peterborough, were first with very good blooms of Star of Waltham, Caroline Testout, Danmark, Clio, Horace Vernet, Bessie Brown, Madame Jos. Conrbet, Sénateur Vaisse, Bladud, Duchess of Bedford, Madame Eugène Verdier, Alfred Colomb, Mrs. J. Laing, Marchioness of Londonderry, &c. Mr. W. H. Frettingham was second. With twelve varieties of Teas and Noisettes Messrs. Burch were again first, and they had finely developed blooms of Maman Cochet, Innocente Pirola, Maréchal Niel, Ernest Metz, Medea, Madame Chanvry, Madame de Watteville, &c. Mr. C. T. Challans was second. Messrs. Burch were also first with twelve Roses, having Laurence Allen, Alfred Colomb, Caroline Testout, Charles Lefebvre, Xavier Olibo, Mrs. J. Laing, Prince Arthur, Madame J. Courbet, Bladud, Horace Vernet, &c.

Cut herbaceous plants, shown in twenty-four bunches, made a very fine feature. Mr. T. B. Dolby, nurseryman, Boston, was first with such excellent subjects as Alstroemerias, Montbretia, Coreopsis grandiflora, Phloxes, Liliums, perennial Peas, &c.; a very good display. Mr. H. Wells was second. Mr. Dolby scored with twelve bunches of stove and greenhouse cut flowers. Sweet Peas also made a good feature, though they would have been much more attractive could they have been better displayed. Messrs. H. & S. Small won first, the leading varieties being Mars, Lady Skelmersdale, Admiration, Duke of Westminster, Mr. J. Chamberlain, Lady Grisel Hamilton, Dolly Varden, Gorgeous, Sadie Burpee, Countess Cadogan, Lovely, &c. Mr. F. M. Bradley was placed second. Hardy annuals shown in twenty-four bunches were staged, too large a number of varieties to secure the best things. Dahlias, Show and Pompons, were fairly good; and the Cactus varieties, having regard to the season, were very good. Herbaceous Phloxes and Pentstemons were also shown in collections.

The most attractive horticultural exhibit, consisting of cut flowers and plants, came from Mr. F. M. Bradley; Mr. G. Wood Ingram was second. There were several classes for cut flowers from which the trade are excluded, and they were generally well filled. In the class for twelve bunches of hardy herbaceous and bulbous flowers Miss E. Porter, who was placed third, should certainly have been placed first, for the exhibit contained a glorious bunch of *Tropæolum speciosum*, two fine bunches of Lilies, one of *Delphinium*, one of *Scabiosa caucasica* in very fine form, and other subjects in proportion.

The best collection of fruit came from the Earl of Sandwich, Hinchinbrooke, and consisted of Black Hamburgh and Muscat of

Alexandria Grapes, Hales' Early and Royal George Peaches, Lord Napier Nectarines, Melon, Cherries, &c. Mr. W. F. Clarke was second, who had fine Black Hamburgh and Foster's Seedling Grapes, but fell away in the other fruits. Mr. J. Thorns was first with two bunches of black Grapes, and also with two bunches of white. Peaches, Nectarines, Melons, Gooseberries, Currants, &c., were plentifully exhibited.

There were tables, 8 feet by 4 feet, on which ladies arranged floral decorations. The prizes were awarded by the judges to Mrs. F. Small, Miss M. Porter, and Miss E. Porter. A charming bouquet, composed mainly of Orchids, obtained the first prize for Messrs. Illman & Co., art florists, Lincoln. There were ladies' sprays and buttonholes also.

Vegetables were numerous and finely shown, especially for special prizes given by Messrs. W. W. Johnson & Sons, Ltd., Boston, and Mr. G. Wood Ingram, seed merchant, of the same town. Potatoes were especially good in many cases, clean, bright, and symmetrical.

A collection of artistic floral decorations, contributed by Messrs. Illman & Son, Lincoln, was greatly admired.

In addition a special exhibition of culinary and Sweet Peas was held in a large tent in competition for a series of prizes offered by Messrs. W. W. Johnson & Sons, Ltd., seed merchants, of Boston. Last year this well known local firm offered special prizes for Sweet Peas, and were so much encouraged by what was produced that they this year arranged ten classes for Sweet Peas and eight for culinary Peas, and so numerous were the entries that it was found necessary to erect a tent 100 feet in length by 50 in width in order to take the exhibits. In the centre was a huge pyramid of Sweet Peas in sprays, each spray formed of several stems, and each in a vessel of water. This rose up out of a square of tables, on which were arranged the dishes of culinary Peas, as well as examples of the large collection grown by Messrs. W. W. Johnson & Sons. A further large table contained large bunches of a special selection of Sweet Peas, bunches of showy hardy annuals, &c. The Sweet Peas were arranged round the sides, and were generally tastefully set up in elegant bunches with appropriate foliage. The best twenty-four bunches came from Mr. T. Vickers, Alford; the leading varieties, which were in very fine character, comprised Countess of Cadogan, Blanche Burpee, Venus, Gaiety, New Countess, Lady M. Currie, Sadie Burpee, Boreatton, Duke of Westminster, Oriental, Mrs. J. Chamberlain, Mars, Queen Victoria, Gorgeous, Lady G. Hamilton, Lottie Hutchins, &c. Mr. H. Marriott was second, having as distinct from the foregoing Captivation, Prima Donna, Cardinal, Indigo King, Navy Blue, Lemon Queen, Aurora, and Dorothy Tennant. Mr. R. Stowe, Kimbolton, had the best twelve varieties; he had in fine character Lovely, Lottie Hutchins, Mars, Royal Rose, Navy Blue, New Countess, &c. The Earl of Sandwich was second. There were classes for six and three varieties, and classes also for amateurs, the foregoing having been open. Decorated tables of Sweet Peas were very pretty, Miss Matthews, Boston Weir, and Miss Mawson second. There were also some very pretty-arranged baskets of Sweet Peas.

The culinary Peas exhibited included such leading varieties as Johnson's British Empire, with extra fine long green pods; Laxton's Hybrid, Sharpe's Queen, Eureka, Johnson's Perfection, Johnson's Exhibition, Prince of Peas, Johnson's Magnificent, Autocrat, Daisy, Stratagem, Windsor Castle, Duke of Albany, The Gladstone, Boston Unrivalled, Johnson's Favourite, Duke of York, &c., a display of very fine pods indeed.

Melons.

WHERE fruit is desired in October, plant at once, giving the plants about a couple of barrowloads each of soil. Good, rather strong loam, is most suitable. Keep the stem of the plant slightly raised, and water to settle the soil about the roots. Encourage a free growth by syringing at closing, and ventilate between 70° and 75°.

Where very late Melons are required a sowing should be made at once, the plants being fit to place out in about a month, and they will set fruit in September, which will be ripe in November or December, when they are esteemed for variety at dessert. It is no use, however, attempting to grow late Melons without command of a light, well-heated structure. In order to have Melons of good finish and high flavour the plants must not be overburdened. Large and very strong plants may be allowed to carry six fruits.

In the case of fruit ripening, the atmosphere should be kept dry, affording a top heat of 70° to 75° by artificial means in the daytime, and 65° at night, admitting a little air constantly. A circulation of rather dry warm air greatly improves the quality and finish when the fruit is ripening. Water should be withheld from the house unless there is fruit advancing in swelling, when an occasional damping will be necessary for the benefit of the foliage. The latest plants in pits and frames are, or should be, setting their fruit. It is important that this be effected promptly, to allow time for the swelling and proper ripening of the fruit. Fertilise the flowers daily about noon; keep the growths thin and well stopped, maintaining a warm but not stagnant atmosphere by early closing with sun heat, the temperature rising to 90° or 100°. Sprinkle the foliage on bright afternoons, and afford water in bright weather about twice a week.—W. R.

Birmingham Gardeners at Elvaston.

THE annual outing of the members and lady friends of this association took place on the 24th inst. The venue was Elvaston Castle, Derby, by the kind permission of the Earl of Harrington, where his lordship's long experienced head gardener and famous fruit grower, Mr. J. H. Goodacre, gave a kindly welcome. Arriving at Derby about 10 A.M., luncheon was partaken of at the Derwent Hotel. Vehicles were requisitioned for the four miles journey to Elvaston Castle. Entering the park we proceeded down the long but narrow drive, bordered on both sides with a wide stretch of grass bounded by the magnificent avenue of such as Horse Chestnuts and Copper Beech, to the ornamental iron-gates.

The approach to the Castle by the north front is not so imposing as it must have been when the splendid gates brought from Malmaison, which are at the end of the south front, formed the principal entrance. The east front, facing the river Trent, has an imposing aspect, as it has a magnificent avenue of Deodara Cedars and Golden Yews about 400 yards long. The latter are especially imposing with their vigorous unpruned branches boldly standing out, in fanciful resemblance to petrified trees of gold. Fine and vigorous specimens of *Abies nobilis glauca* are in great numbers. Arriving near the stables the party were met by Mr. Goodacre, and at once inspected a portion of the rich arboreal treasures close at hand. They saw what is said to be the finest Golden Yew tree on earth, as well as the progenitor of all the Golden Yews extant, and raised by the late Mr. Barron, the famous arboriculturist and transplanter of large trees at Elvaston. The introduction of this invaluable shrub alone would have been sufficient to hand his name down to posterity. The specimen in question, as stepped by the writer, measures about 50 yards in circumference, and formed an oblong Pear-like outline. The exterior branches, however, do not emanate directly from the parent stem, having been produced from a succession of layers. Another fine specimen growing in a different portion of the grounds, though not so large as the specimen in question, has extended its long branches around without the aid of layering.

Before extending their peregrinations, as the rain began to descend freely, an adjournment was made to the fruit structure, notably the large Muscat of Alexandria vinery, measuring upwards of 100 feet long by 30 feet wide, span-roofed with a "lantern" apex, and the rafters springing from the side lights, about 4 feet from the borders inside, the roots of the Vines being confined to the inside of the house. The structure is heated by ten rows of 4-inch pipes, three horizontally laid on either side of the path in the centre, and two on each side of the house. This imposing house was built some six years ago, and the vigorous Vines are producing their fourth crop. A notable feature is the distance the rods are trained from the roofs—viz., about 3 feet, thus allowing ample room for the development of the laterals and foliage above. The vigorous foliage was in a perfect state of health, and there had never been any necessity for dressing the Vines with insecticides since first planted, a favourable cause having been the exclusion of stove and greenhouse plants from the structure. The visitors freely admired the magnificent crop of exceedingly fine bunches, rational in number, and furnished with large berries, and the uniform disposal of the bunches all over the house left nothing to be desired. The berries are on the eve of colouring, and the temperature is kept comparatively low, as the crop is required for later use. When fully matured very many of the bunches would make their mark on the exhibition table, and the apology for the foregoing details is that probably interested readers of the Journal will be glad to learn a little, at least about one of the more notable fruit structures at Elvaston.

Space will not permit of a detailed description of the crops of Grapes contained in the several other vineries, but suffice it to say some splendid examples of ripe and ripening black kinds were greatly admired, whilst heavy crops of them were predominant, and the healthy foliage was premonitory of high quality in the ripe fruit.

There were also excellent crops of Peaches, Nectarines, Figs, Melons in superabundance, and Tomatoes to repletion. Very interesting also were the Plums, Apples, and Pears in pots, each laden with fine fruits, grown in a large cool house for early autumn use. The whole extent of glass, including the unheated wall structures, is about a mile in extent. The numerous fine specimens of Apple and Pear trees in kitchen and orchard gardens are generally lightly cropped this year owing to the adverse weather when the trees were in bloom. Special mention, however, may be made of a remarkably fine and tall tree of Marie Louise Pear, about 34 feet in height, occupying the whole space of the gable end of one of the brick built offices, and laden with fruit.

Resuming their peregrinations in the grounds, the famous and unique topiary work at once came under observation, and of which it would take the pen of a Ruskin to fully describe, even if it was capable of so doing, so intricate, variable, and extensive is its proportions. Even the excellent photographic representation contained in the *Journal of Horticulture* of January 3rd, 1901, gives but a faint idea of its extent. This topiary work, "sculptured arboreal greenery," is calculated to excite surprise rather than admiration, and it serves as an illustration of the topiary foibles of our horticultural ancestors of

the sixteenth and seventeenth centuries. The extreme formality of the topiary work, however, at Elvaston is greatly relieved by the noble Conifers and other tall and fine old trees around it. The great profusion and richness of the topiary "Golden Yews school" amounts to oppressiveness, and it might be readily designated a "golden garden." Situated in harmony with its topiary surroundings is an interesting summer-house, being a portion of a Moorish temple brought from Algiers, contains two large windows of costly stained glass.

In one portion of the grounds was to be seen a very tall weeping Ash, about 80 feet high, completely denuded of branches up to nearly the summit, and from which long depending slender twigs reach nearly half way down. One of the tallest *Araucaria imbricata* was also noted amongst several other very lofty specimens of the kind. It presents a somewhat naked and ragged appearance, owing to the loss and decay of its lower branches. Another striking object was a finely developed Alder tree nearly 100 feet high, growing at the edge of the large and picturesque tree-begirt lake, with also bold and striking presentations of rockery, both natural and artificial, on the opposite side of it looking from the topiary garden. The surface of the lake, however, presented a far from bright appearance, owing to the coating of confervæ and other aquatic weeds which are allowed to predominate, it being Lord Harrington's desire that the lake, and such as the gravel walks in the pleasure grounds, be not kept in burnished order. The topiary work, however, is well trimmed. The arboreal features are remarkable for the profusion of the elegant Canadian or Hemlock Spruce, and they were evidently great favourites with the planter, the late Mr. Barron. Several fine Lebanon and Mount Atlas Cedars bearing cones make a feature in the landscape, and amongst other fine specimens of Coniferae was to be found tall and massive ones of the true *Abies Douglasi*, from the Blue Mountains in North America.

Another object of interest in the topiary garden was pointed out as the raised mound-like grass-covered sepulchre of the deceased Earl, who was the founder of the topiary garden here, and it seems fitting that his remains should be interred amidst the work he loved so well. At the bottom stone steps leading down to the entrance of the vault or mausoleum is a massive iron door, kept securely locked. Situate in the centre of a thicket of bare-branched Yews is a relic of the late Mr. Barron's tree-transplanting labours; it is a very old and trunk-decaying Yew, the interior of which is almost large enough to contain a full-sized man, whilst the boughs above are in a fairly healthy condition. All around, however, is reminiscent of the ability and industry of the late *genius loci* (Mr. W. Barron), and his works must be seen to be fully appreciated.

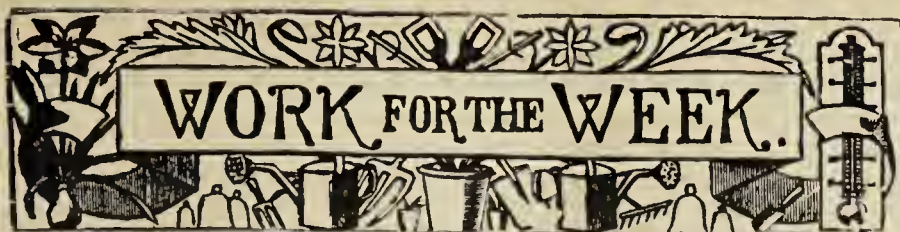
Altogether the visit to Elvaston was one of the most interesting of outings, barring the weather, yet enjoyed by the association. Arriving at Derby on the return journey, an excellent tea was partaken of by the party at the Derwent Hotel, and afterwards sufficient time was allowed for a visit to the interesting public museum, ere starting for the city of hardware, homewards bound.—W. G.

Gardening at the Glasgow Exhibition.

SOME of the leading nurserymen in Scotland and Ireland have exhibits of trees and shrubs planted throughout the exhibition grounds at Glasgow. The Japanese garden, staged by Messrs. Yamanaka and Co., London, showing dwarfed shrubs, is very interesting. A *Thuja obtusa aurea nana*, about twenty years old, only reaches the height of 4 inches; another plant of the same, which reaches only 4 feet in height, is 250 years old. This may be taken as an exaggeration, but the statement is plain upon the labels. A plant of *Pinus parvifolia*, 3 feet high, ages sixty years. A Pine and Acer, which were united (?) in a young state, are growing quite happily together. *Podocarpus macrophylla* is shown a hundred years old, and is only 3 feet high; *Podocarpus chinensis variegata* is seventy years old. This is a beautiful little plant standing 2½ feet high; the stems seem to have been twisted when in a young state, and as they are not given much root room, their growth must have been greatly retarded in this way.

Mr. Hugh Dickson, Newtownards, Belfast, has a grand display of shrubs of the very finest sorts, among them a small plant of *Cupressus macrocarpa lutea*. Messrs. Austin & McAslan, Glasgow, exhibit fine specimens of Ivies of every variety worth growing; while Mr. Matthew Campbell, High Blantyre, has some beds of Carnations and Picotees of the best sorts, quite a mass of bloom. Messrs. Dobbie & Co., Rothsay, have a stall inside the buildings, in which they show out florists' flowers and pot plants. There is also in the grounds a beautiful rockwork and cascade, erected by Messrs. Pulham & Son, London, and well planted out with rock plants and herbaceous. Then there is summer bedding, done by the Parks Department, so that gardeners when visiting the exhibition will see something instructive as well as interesting in their own line of business.—A. B.

Canada wants 20,000 labourers to get in the harvest in the North-West, and the Canadian Government asks for English labourers to meet the demand.



Fruit Forcing.

Vines.—*In Pots for Early Forcing.*—To have ripe Grapes from Vines started in November, by the end of March or early in April, the canes ought now to have the wood thoroughly brown and hard, buds well developed and somewhat prominent, with foliage assuming the sere and yellow condition. If not, keep the house rather warmer by day, 80° to 85°, with ventilation, closing the ventilators considerably, in the early part of the afternoon, to raise the temperature to 90° or 95°, and opening them fully at night. This, and the full exposure of the foliage to light, will induce maturity. Supply water or liquid manure to prevent the foliage becoming limp, but do not give it until the soil is getting dry.

Lateral growths must be kept in check, leaving only enough to appropriate any excess of sap, and so prevent the principal buds starting. When sufficiently ripened, as they are when the wood becomes brown and hard and the buds are plump, they should be removed to a position outdoors in the full sun. Place them on a board or slates in front of a south wall, fence, or building, and secure the canes to the face of the wall, only giving water to prevent the leaves falling prematurely. Have some waterproof material at hand to throw off the rain from the pots in case of heavy showers occurring. In this position, or even in a house ventilated to the fullest extent, they will rest without the leaves being shed, provided they are not kept too moist. When the leaves turn yellow, commence reducing the laterals, and the leaves having all fallen, prune, cutting the laterals close to the cane; avoid injuring the buds, and cut the cane back to the length required, or from 6 to 8 feet. Dress all the cuts with patent knotting. The Vines should be placed in a cool, airy, dry place until required for forcing. Dryness at the roots is advisable, but the soil must not become so much devoid of moisture as to cause the wood to shrivel, and the needful precaution must be taken against frost.

Earliest Forced Planted-out Vines.—A dry atmosphere is now necessary, which will be secured by full ventilation and the withholding of atmospheric moisture by discontinuing the dampings or occasional syringings. All laterals must be kept stopped and the house cool, with moderate dryness at the roots. Where the Vines are in an unsatisfactory condition preparation should be made for lifting, getting fresh loam and clean drainage, so that the work may be quickly performed. When the Vines have the run of outside and inside borders, one part only ought to be operated on at once, the inside one year, and the outside the next. This prevents loss of crop, but when the roots are all inside there is no help for it but to lift the Vines bodily, and when this is done carefully the crop of the following year will not be materially prejudiced. The Vines will need pruning by the middle of September, or when lifted a little later.

Grapes Ripening.—Many Grapes swell considerably whilst ripening, therefore a moist, but not saturated, condition of the borders is important. Give the needful supplies of water or liquid manure, always in the early part of the day, so that the superfluous moisture may be dissipated before night. Heavily cropped Vines should be allowed time, and be supplied with phosphatic matter, such as dissolved bones, dry and crumbling, with a little potash and magnesia. Three parts superphosphate or dissolved bones is good, and two parts double sulphate of potash and magnesia, mixed, applying 3 or 4 cws. per square yard, and working in lightly. The bones will supply sufficient nitrogen at this stage, and the fertiliser will not only help the current crop but supply matter for storing, to profit the Vines in the following season. A good rest at night in a temperature of 60° to 65° with air, is a great aid to Vines taxed to the utmost by weight of Grapes. A moderate amount of air-moisture also is essential to the health of the Vines, sprinkling the paths and borders occasionally, and, if possible, allow the laterals to extend. Full or overcropped Vines rarely can cater for more than the principal leaves and Grapes. Admit air constantly, enough with a gentle heat in the pipes to insure a circulation, and maintain a temperature by day of 70° to 75°, keeping through the day at 80° to 85° or 90° with sun, and full ventilation.

The Kitchen Garden.

Cabbage.—The spring crop of Cabbage must now be sown on a piece of ground that is moderately rich and open. Dig up the ground well and bring it into a pulverised condition, then afford a copious watering. Scatter the seed thinly and evenly on the surface, and cover with a layer of fine soil. Should the weather be very hot and dry, shade the ground with mats until the germination of the seed commences, then remove them and maintain the soil moist afterwards. A steady growth is essential, and will produce good plants. Sutton's Flower of Spring, Ellam's Dwarf Early, Wheeler's Imperial, Dicksons' Perfection, Webbs' Emperor, and London Market are excellent for present sowing.

Celery.—Forward rows of white Celery may now be finally earthed, so that well blanched sticks may be procurable early in September.

Previous to giving the final moulding up, however, thoroughly soak the roots with water or liquid manure, seeing, however, that the hearts are not saturated at the time the soil is placed about them, which should also be kept from the centres. Successional rows should also be trimmed, watered, and a little fresh material chopped down about the plants and carefully drawn round, first drawing the leaves together with strands of raffia grass, not too tightly. The trimming should consist of removing sucker growths and short basal leaves previous to the first placing of soil round the plants.

Endive.—Where Endive is appreciated a sowing should be made of the Broad-leaved Batavian or Green Curled. It is best sown in drills drawn a foot apart, and moistened before sowing, just covering with dry soil. Thin out the seedlings before crowding takes place.

Lettuce.—Seedling Lettuce for an autumn supply should be well thinned out where the seedlings stand thickly together, but it ought to be done before they become drawn and spoiled. Make a sowing of a row or two for succession, and to stand the winter. The hardy varieties are best for this purpose, including Hardy Hammersmith, Winter White Cos, All the Year Round Cabbage, and Black-seeded Bath Cos and Brown Cos.

Winter Greens.—Curled Kale, Coleworts, and Savoys may still be planted out, though the earlier this is done the better. Afford liquid manure at the time of planting, and afterwards, if available, this materially enriching the soil. Hoeing the surface between the rows of plants whenever the surface hardens maintains a suitable condition for encouraging growth.

Broccoli.—Rapid and luxuriant growth is not so desirable for these as steady progress and stocky plants. If any plants still remain to be placed out insert them on firm ground. On such ground planting cannot usually be carried out with a dibber, hence it is desirable to form holes with a crowbar. Insert the roots straight down, work some soil amongst them, and water freely.

Late Peas.—Encourage the growth of late Peas by mulching the soil down each side of the rows with manure, and water freely with liquid. Lack of moisture in the soil will cause them to fail.

Beans.—Scarlet Runner Beans will succeed well if due precautions are taken to maintain the soil moist. Copious applications of water and liquid manure are, therefore, essential, followed by a thick mulching of manure. Freely gather the pods as they become ready, allowing none to remain on the plants to become old. Dwarf Beans are now over, hence the old plants may be pulled up. A sowing may be made in a frame, which will furnish a few gatherings late in the season.

Parsley.—Simple as the cultivation is, this crop is sometimes very scarce owing to missing suitable opportunities for sowing. The present time is a very good period to sow a few rows, or to scatter the seed broadcast on a bed. In very dry weather water the bed or drills well first. The seed has time to germinate and grow to a fair size before winter, and in spring an excellent bed is obtained, which will last through the summer with only a small proportion of plants running to seed.

Onions.—The tops of Onions which are still green, may be bent over, and this will assist in the maturation of the bulbs previous to lifting the crop. Ground for sowing Tripoli Onions may be well dug over, not adding much manure. Sowing may be carried out shortly.

Publications Received.—Summer number of the "North British Agriculturist," containing thirty-one portraits of leading agricultural men of the North; supplement, July 10th. "Journal of the Department of Agriculture of Western Australia," June, 1901; contents: Cultivation of Lucerne, Raisin culture, Injurious effects of certain grasses to live stock, Fruit tree pruning, Poultry feeding experiments, &c. "Seventh Annual Report on Field Trials, 1900, of the Agricultural Department of Reading College;" contents: Manure for hay and pasture, Manures for rotation crops, Seeds for hay and pasture, Manuring of crops, Notes on Manures; the author is Mr. Douglas A. Gilchrist, B.Sc., F.R.S.E. "Gartenflora," July 15th, 1901. "Annual Report of the Proceedings under the Sale of Food and Drug Acts, 1875 to 1899;" "The Merchandise Marks Acts, 1887 to 1894;" "The Fertilisers and Feeding Stuffs Act, 1893;" and "The Board of Agriculture Act, 1889" (section 2, sub-section 3), by the Intelligence Division of the Board of Agriculture for the year 1900; the price is 3d., through any bookseller, or from Messrs. Eyre & Spottiswoode. "Rhineland," published at 30, Fleet Street, E.C., no price stated; it is a small pamphlet. "The South Sea Islands; Notes of a Trip," by Mr. R. Cheesman of Brighton Nurseries. The contents of this exceedingly interesting publication describe what Mr. Cheesman saw, and in part what he did, and information on a variety of subjects relating to natural history, botany, biology, &c., during a seven weeks' tour through the New Hebrides group of islands. The publication is in peculiar, soft brownish, gilt-paper covers. We may have more to say about the booklet. "The Leader," Melbourne, June 8th, 1901. "The Florists' Exchange." "Handbook of the Destructive Insects of Victoria," Part III., French, 2s. 6d.; a marvel at the price, laden with beautiful coloured plates of birds and insects. "Holidays in Belgium, with Brussels and the Ardeunes." "Pacific Coast Fruit World." Cassell's "Dictionary of Gardening," Part III., contains a coloured plate of *Coleus thyrsoideus*, and numerous illustrations, price 7d. "Board of Agriculture Leaflets," 68 and 69, on "Currant Aphides" and "Tent Caterpillars"; these can be had free from 4, Whitehall Place, London, S.W.

TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Doryopteris ludens (A. P.).—This beautiful Fernlet (here figured) has creeping rhizomes, as our engraving shows, and these are furnished

with linear adpressed brown scales, which have white margins. The stipes (or stalks) are solitary, distant and polished; sometimes they have a few scales, and often a dusky subtomentose pubescence at the base. The barren fronds are on stipes 3 to 4 inches long, triangular, with slightly deflexed basal lobes, hastate, and spreading lateral lobes, having entire margins. The fertile fronds are on longer stipes, cut down into fine linear-lanceolate or lanceolate lobes—one erect, two spreading, and two deflexed, of which all except the last are sometimes again forked. The fronds are leathery and polished, and the veins are almost hidden. It is a native of the Chittagong Hills and other parts of India, and is also found in the Phillipine Island. For indoor rockeries in pockets, where attention can be given, it will succeed. The treatment is similar to that of dwarf Polypodiums or Pteris. You must not confuse Doryopteris with Dryopteris. Does this answer your question?

Lawn Tennis Court (John)

—A court for the single game is 27 feet wide and 78 feet long, and for the double game, 78 feet long and 36 feet wide. Those are the measurements of the single court for two players, and of the double court for three or four players respectively. The posts for supporting the net should be placed 3 feet beyond the sides. The ground is quite another affair, for the balls, or rather the players of tennis, are often very erratic, and considerable space is required at the sides, and particularly ends of the court. It is usual, therefore, to have the ground considerably larger than the court, half the width on each side, $13\frac{1}{2}$ feet for single game and 18 feet for double game, and half the length at each end, or 39 feet. Thus the ground for single game would be 156 feet long and 54 feet wide, and that for the double game 156 feet long and 72 feet wide. Where space is limited less distance is allowed outside the court at the sides and ends, but it is always advisable to allow as near the foregoing dimensions as possible for the ground, as cramping spoils the playing of the game, there being pleasure in having plenty of "elbow room," alike to players as to onlookers. For croquet it is usual to allow the same dimensions as for lawn tennis, though where the space is limited, that for playing

croquet need not exceed the 78 feet length and 36 feet width of the double game tennis court. For croquet golf, however, the ground should be quite equal in length and width as required for lawn tennis.

Training Young Trees (N. P. R.).—Young Cherry, Pear, or Apple trees from cut-backs, having made serviceable and suitable side shoots, should be spread out in the pattern they are hereafter to be grown in, whence they may be secured to stout stakes. Thus, if they are to be trained horizontally, fix in two or three upright canes and tie a horizontal cane to them; to this horizontal one fix the side shoots, and thin out those not required.

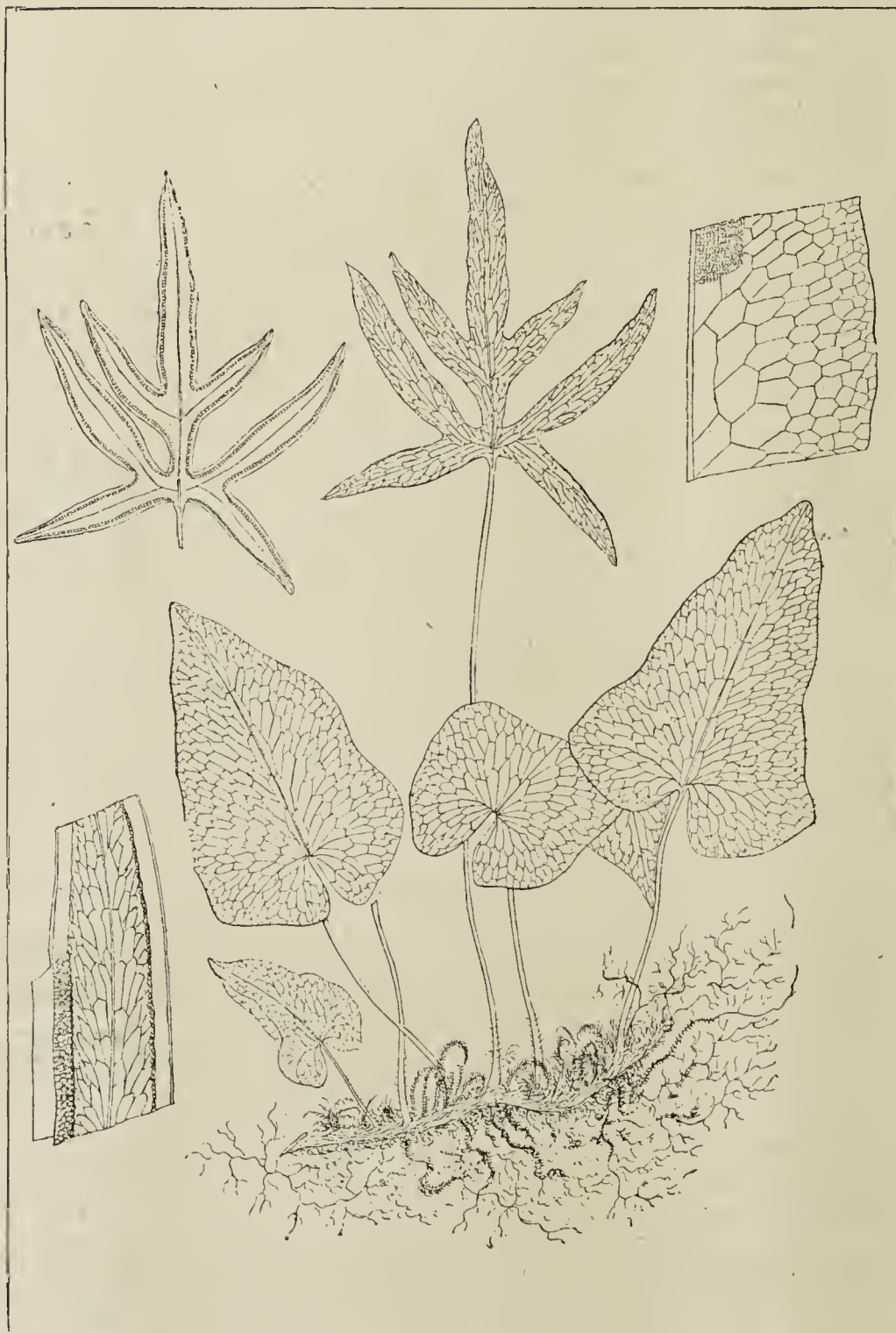
Disbudding and Thinning Out Dahlias (Double Cactus) (T. C. C.).—We are not aware of any work that treats of this subject, and it is difficult to give instructions without illustrations. We may say, however, that it is usual to allow only a few of the strongest and most promising growths on a plant, attending to this early by disbudding, reserving three, or at most four, of the best shoots, securely staking these so as to give them every advantage of light and air. The growths thus secured should not be allowed to branch too much, but have the

side growths removed, and this will give vigorous terminal promise of bloom, the buds of which should be thinned whilst quite small, and to have fine blooms the terminal bud of each shoot only should be retained, taking off the others with the point of a sharp knife as soon as they are discernible. This will concentrate the vigour in the buds retained, and the blooms will accordingly be fine, they being duly shaded from sun and protected from rain, their greatest enemy, earwigs, being kept in subjection.

Diseased Tomatoes (N. S. R.).—Attacked by sleepy disease fungus, *Fusarium lycopersicum*, which has been dealt with fully in our pages on numerous occasions, even so late as June 6th. Diseased plants should be burned, every inch of them. When the house has had diseased plants the soil should be removed, or treated with lime or basic slag phosphate, 2 lbs. per square yard. Wash or syringe the walls and woodwork with a solution of iron sulphate, 25 lbs. per 50 gallons of water and 1 pint of sulphuric acid. Seeds should never be saved from diseased plants.

Grapes Splitting (W. S.).

—Can you give me any reason for my Grapes Madresfield Court not colouring and splitting? I found they were not colouring; thinking the border might be dry at the bottom I gave it a good watering outside, and since they have split, as you see. The cane is carrying a heavy crop, a 12-foot cane carrying twenty bunches, averaging $1\frac{1}{2}$ lb.; the first 6 feet of Vine are carrying sixteen bunches; it broke badly, so I carried up a young piece, which also broke badly. I have four canes, Muscat of Alexandria carrying, if anything, a heavier crop, and are doing well, but Black Hamburgh not colouring as it ought to. Red (Grizzly) Frontignan sbanks very badly. [The Vines must have been checked for a period by dryness at the roots. The flesh of the berries would thus start to firm-up and the skins to barden. Then you watered the Vines, and the renewed absorption of fluid by the berries caused the inelastic skins to split. Their lack of colour is probably due to a faulty supply of nourishing matter, or to too heavy cropping. Follow hints weekly under "Work for the Week."]



DORYOPTERIS (PTERIS) LUDENS.

Height of Jericho (Reader).—In your issue of July 25th, 1901, on page 72, in the article on "Tropic Fruits," I see it stated that Jericho is 2500 feet below the level of the Mediterranean. The Encyclopædia Britannica gives it as 700. Which is right? I think the latter. [We have referred to the "Encyclopædia Britannica" and find that 700 feet is given as the height of Jericho above sea-level.—ED.]

Books (Student).—Undoubtedly for general reference purposes Nicholson's "Dictionary of Gardening" has no equal in this country. As a good, practical work, you would do well to get Thompson's "Gardeners' Assistant," the revised edition of which is being produced now, under Mr. Watson's editorship. The prices in both cases are somewhat high, but they are worth the money.

Male Flowers on Cucumber (J. W. Dunn).—The flowers were not very distinct, but they show that unusual exuberance has caused the outgrowth of leaves at the apex of the fruit, this, of course, representing a product from the female flower. Some of the veins—i.e., fibro-vascular bundles of the fruit—have run out, and spread forth as very small leaves. The male flowers, too, are abnormally developed, and no good for fertilisation, though this is neither necessary nor desirable with Cucumbers.

Woodlice.—Will you be so kind as to inform me how to get rid of woodlice, which overrun our greenhouse? We are trying very hard to get our stock into the best of shape, but are disheartened, for these pests are like a little army, devastating everything. They are large and look very much like a grain of coffee, brown at first but growing black with age. They are very hard, and when touched lie quite still for a time, but when they move run swiftly. It would be a blessing could we be rid of them.—M. T. [To a quart of cornmeal add enough brown sugar to sweeten, mix well together, and add two tablespoonfuls of Paris green. Moisten a little with water, just so it will hold together. Place the mixture about in small quantities on or under the benches, or wherever the woodlice may be.]

Names of Plants (J. W. Dunn).—*Lagerstromia indica*. (A Reader).—*Hedychium flavosum*. (Miss Ballard).—*Æthusa Cynapium*, commonly called Fool's Parsley. (Sender).—1, *Mesembryanthemum deltoides*; 2, *Mesembryanthemum Browni*; 3, *Mesembryanthemum Lehmanni*; 4, *Spiræa salicifolia* var.; 5, *Trachelium cærneum*. (A. R.).—1, *Statice rosea*; 2, *Fuchsia triphylla superba*; 3, *Fuchsia fulgens*; 4, *Fuchsia parviflora*. (R. S.).—1, *Torenia Fournieri*; 2, *Impatiens Sultani*; 3, *Solanum Seaforthianum*; 4, *Brunfelsia macrantha*; 5, *Nerium Oleander*. (A. P.).—Please adjust your numbers so that they can be seen without having to untie the ligatures; we are pleased to assist. 1, *Potentilla colorata*; 2, *Sidalcea malvaeflora atro-purpurea*; 3, *Linaria purpurea*; 4, *Catananche carulea*, see future notes under "Garden Gleanings"; 5, *Epilobium angustifolium*, the Willow Herb; 6, *Caragana arborescens*; 7, *Pieris Mariana*; 8, *Spiræa japonica ruberrima*; 9, *Spiræa albiflora*; 10, *Hypericum calycinum*, a capital edging plant or for dry banks, also called the Rose of Sharon; 11, *Piptanthes nepalensis*, flowering late. (J. Mc.).—We thank you for sending large and good specimens, with proper labels attached; it saves our time ever so much. 1, *Prunus virginica*; 2, *Polygonum cuspidatum*; 3, *Sciadopitys verticillata*, the Umbrella Pine; 4, *Rhus Cotinus*, the Chittan-wood or Smoke Sumach; 5, *Pittosporum undulatum*; 6, *Caragana microphylla*; 7, *Gingo biloba*, otherwise named *Salisburi adiantifolia*, the Maidenhair Tree.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Next Week's Events.

Friday, August 2nd.—Devon and Exeter Horticultural Society's Summer Flower Show; Kirkbean and District, at Carsethorn, near Dumfries, N.B.

Saturday, August 3rd.—Auldarn Horticultural Society.

Monday, August 5th.—Atherstone Exhibition; Castleford Exhibition (two days); Eynsford Exhibition.

Tuesday, August 6th.—Scottish Horticultural Association meet.

Thursday, August 8th.—North Oxford Exhibition.

Phenological Observations.

AUGUST 2ND TO AUGUST 8TH.		PLANTS DEDICATED TO EACH DAY.
2 Fri.	Large Eggar moth seen.	Tiger Lily.
3 Sat.	Bark of Plane trees crack.	Hollyhocks.
4 Sun.	Mugwort flowers.	Bluebells.
5 Mon.	Mushrooms abound.	Egyptian Water Lily.
6 Tu.	Roses' second flowering.	Meadow Saffron.
7 Wed.	Catalpas pass out of bloom.	Common Amaranth.
8 Thr.	Swift last seen.	Love-lies-bleeding.

Covent Garden Market.—July 31st.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apricots, 20s., 24s. ... box	1 0	to 1 3	Grapes, Muscat ...	2 0	to 3 0
" ½ sieve ...	4 0	6 0	Lemons, Naples, case ...	24 0	30 0
Bananas ...	8 0	12 0	Melons, each ...	1 0	2 0
Figs, green, doz. ...	2 0	4 0	Pines, St. Michael's, each	4 6	6 0
Grapes, Hamburgh, lb. ...	1 0	2 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2 0	to 3 0	Horseradish, bnch. ...	1 2	to 1 6
" Jerusalem, sieve	1 6	0 0	Leeks, bunch ...	0 1½	0 2
Batavia, doz. ...	2 0	0 0	Lettuce, doz. ...	0 6	1 0
Beans, French, bushel ...	4 0	5 0	Mushrooms, forced, lb. ...	0 8	0 9
Beet, red, doz. ...	0 6	0 0	Mustard and Cress, pnnt.	0 2	0 0
Cabbages, tally ...	1 6	3 0	Parsley, doz. bnchs. ...	2 0	3 0
Carrots, new, doz. bnch. ...	3 0	4 0	Peas, bus. ...	4 0	0 0
Cauliflowers, doz. ...	0 0	0 0	Potatoes, new English, ct.	4 0	6 0
Chicory, Belgian, lb. ...	0 4	0 0	Radishes, doz. ...	0 6	0 9
Corn Salad, strike ...	1 0	1 3	Shallots, lb. ...	0 4	0 0
Cucumbers, doz. ...	2 0	3 0	Spinach, bush. ...	4 0	5 0
Endive, doz. ...	1 3	2 0	Tomatoes, English, lb. ...	0 3	0 4
Greens, bush. ...	1 0	1 6	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch ...	0 2	0 0	Watercress, doz. ...	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5 0	to 12 0	Fuchsias ...	3 0	to 4 0
Araucaria, doz. ...	21 0	30 0	Geraniums, scarlet, doz.	2 0	4 0
Aspidistra, doz. ...	18 0	36 0	" pink, doz. ...	2 0	4 0
Campanula, pyramid, doz.	10 0	12 0	" King of Denmark, doz.	3 0	4 0
" isophylla ...	4 0	6 0	Hydrangea panicula, doz.	18 0	24 0
Crotons, doz. ...	18 0	30 0	Hydrangeas, white, pink	9 0	0 0
Dracæna, var., doz. ...	12 0	30 0	Lycopodiums, doz. ...	3 0	4 0
Dracæna, viridis, doz. ...	9 0	18 0	Marguerite Daisy, doz. ...	3 0	4 0
Euonymus, var., doz. ...	6 0	18 0	Mignonette, doz. ...	6 0	0 0
Evergreens, var., doz. ...	4 0	18 0	Myrtles, doz. ...	6 0	9 0
Ferns, var., doz. ...	4 0	18 0	Palms, in var., doz. ...	15 0	30 0
Ferns, small, 100 ...	10 0	16 0	" specimens ...	21 0	63 0
Ficus elastica, doz. ...	9 0	12 0	Pelargoniums ...	6 0	8 0
Foliage plants, var., each	1 0	5 0	" Ivy leaf ...	4 0	6 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1 6	to 2 6	Marguerites, white, doz.		
Carnations, 12 blooms ...	0 6	0 0	bunches ...	1 0	to 2 0
Cattleyas, doz. ...	15 0	18 0	" yellow, doz. bnchs.	0 9	1 0
Cornflower, doz. bnchs. ...	1 0	0 0	Mignonette, English, doz.	0 9	1 6
Eucharis, doz. ...	3 0	4 0	Odontoglossums ...	3 0	4 0
Gardenias, doz. ...	1 6	2 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz. ...	1 0	2 0
bunches ...	3 0	0 0	" pink, doz. ...	1 0	3 0
Gladioli, doz. bnchs. ...	4 0	6 0	" yellow, doz. (Perles) ...	1 0	1 6
Gypsophila, doz. bnchs. ...	2 0	0 0	" red, doz. ...	0 6	1 0
Iceland Poppies, doz. bnchs.	0 0	0 0	Smilax, bunch ...	1 0	2 0
Lilium lancifolium album	0 9	1 0	Stephanotis, doz. ...	2 0	2 6
" rubrum	1 0	1 6	Stock, white, doz. bnchs.	2 6	3 0
" longiflorum ...	1 6	2 0	Sweet Peas, white, doz.		
Lily of the Valley, 12 bnchs	12 0	18 0	bunches ...	2 0	0 0
Maidenhair Fern, dozen			" coloured, doz. bnchs.	2 0	0 0
bnchs. ...	2 0	3 0	Tuberose, gross ...	1 6	2 0



Where we Stand.

If we should say "very near the brink of ruin," we should have truth on our side, but at the same time we should lay ourselves open to the old charge of being inveterate grumblers. Now, at the end of July, with the summer nearly over, we can hazard a pretty good guess at to what the crops may be. Some are gathered in, the wool crop and the bulk of the Clover and hay. The wool crop, which used at one period to do a good deal towards satisfying the landlord, is of poor avail now, he would hardly be content with it and the sheep into the bargain—6d. to 8½d., and no prospect of betterness. No demand for stuffs made of our British wool; too harsh, too stiff, and too unfashionable! There we suffer. Such is the fact, and a very unpalatable one too. And what about the mutton itself? Good home grown mutton is always of value; but to make the best market it has to be in small neat joints, free from coarseness, free from fat. And it is a great question as to whether all the mutton sold as home-grown, and at home-grown prices, does not hail from another Canterbury not of Kent. There we are hampered again—our wives

clothed with foreign wool, and our friends and best customers fed with Canterbury pilgrims.

Now, then, what about our hay and Clover? Deplorable drought again. How many years is this going to last? We almost prefer the wet years, at any rate then there was plenty to eat; there was no scanty pasture, no water deficit. With drought we stand surrounded by serious difficulties. It is early yet perhaps to speak of the future of the root crop; but this we do see, there will not be a bite of hay or Clover to spare, it will be as dear as Mint, and this when there is nothing to fall back upon—a long, cold spring, when pastures would not grow, exhausted our old supplies. Truly, what has been got is in good condition, that is something, but we want bulk. Taking 100 as maximum, we find that the Grass crops stand at 65, as against 92.4 last year. We have seen ourselves a few good crops, but this in a neighbourhood where the welcome rain has not been totally absent, and where the land was fairly deep. What makes the smallness of the forage crops such a calamity is the fact that under no possible circumstances can we expect great length of straw with any of the grain crops. We are not going into the yield of the Corn crops, for sometimes they finish in a remarkable manner and give us a pleasant surprise.

We may have a pleasant surprise in the case of Wheat, but the less said about Barley and Oats the better. Some Barley and Oats have found great difficulty to shoot at all, and they have no reserve strength to spend on lengthening straw. No one need consider the necessity of enlarging stack yards this season. Even Wheat we see, which likes a dry time, is two points lower than last year, 87.6 as against 89.6. Last year as a whole was a good Barley year, 90.7; this year 77.3, and we think this a trifle over-estimated. Oats were 91.2 in 1900; in 1901, 77.1. Beans, as far as our observation goes, have suffered much from filth, an outcome of the dry weather. It is a trifle early to speak of Potatoes, although we know some that were very late in getting away. This year, again, it is the old tale, change of seed is most patent; there is a vigour about the plants that surely must foretell a good crop. Our Potato growers, too, have found out that it is a crop that calls for the best of tillage, and there is no doubt about it that well tilled land will defy drought for almost an indefinite period. What we have most to fear with regard to Potatoes is that when the rain does come it will come accompanied by violent disturbance, and Potatoes are like a nervous woman, very much wrought upon for the worse by the conditions that prevail during a period of severe thunderstorm. We always seem to get the rain the wrong end of the year, when things are past praying for. A farmer's life is full of disappointments; he sees success almost within his grasp, and, lo! untoward weather frustrates all his hopes. There is one bright spot; the Hop growers are to have a good year. We do not grudge them this for a moment, poor fellows; as a rule their life and lot is not a bed of Roses, but they form so small a part of the noble army of farmers.

One class of men who must have been hit hard by this prolonged drought are the dairy farmers. A cow has a large capacity; she must have plenty of sweet, rich, nutritious food. Where is it to come from? She will not find it in the cow pastures this year. There may be fodder crops to run to, but even they cannot hold good for ever; happy the man who has tares and lucerne *ad lib.* Even then it will be a question of bought food—meal, bran, and the like—and the question that many men will be revolving in their minds is this, Shall I get adequate return for my outlay? We do not offer to answer this, we ask for an easier riddle.

The milk makers, too, have been uneasy in their minds as to what Mr. Hanbury would do respecting the milk standard. It is not a pleasant thing for a respectable man to be branded as a fraudulent dealer because the morning's milk is a point or two below standard. Mr Hanbury being strong has also been merciful, and our minds are at ease. We feel fairly safe, and we shall not dream of heavy fine or its alternative, the treadmill, with a milk can hung round our neck. At any rate July finds us clear of "foot and mouth," and that means a good deal to some of us during the autumn months. Of course we are all glad and thankful to be clear of a horrid disease which apparently attacks all sorts and kinds of farm stock. But some of us got a nasty knock down blow last autumn. We were ready with our best rams for the Argentine and the colonies. Maybe some of us had sheep on the high seas, when, without a moment's warning, the order went forth, "All stock is to be kept at home." Our friends across the sea did not intend to run any risk of importing through us something more than our rams. They were clear of disease, and wisely meant to keep clear, and then we were left with our best sheep on our hands. Well, it's an ill wind, &c., and some of the tenant farmers near home were able to get a first-rate sire for a very modest price.

We do not think the grazier sung a psalm of praise this season. Not much stock will go off to the butcher purely fed on grass; there will be a big account for cake somewhere. Whether it will ever get paid is another question; there will not be much profit to meet it

with. But as far as we can see or hear this eminently dry time has not extended to the northern counties, nor over the border. Those good folks who went a touring with the B.D.F. saw strange sights in the land o' cakes, tremendous crops of all sorts of forage, grand prospects all round. Of course they were in picked districts and saw the cream of the farms, but yet in these favoured places they cannot entirely get along without rain. The sight of so much good provision had the effect of sending many of us home discontented to our bare pastures and stunted crops.

There is another phase of our condition which does not look very promising, we mean our labour supply. It neither improves in quantity or quality, and here we are practically helpless. We cannot in justice to ourselves and families afford higher wages. Whether the landlord can afford to build more ornate cottages and cut up more fields (the very pick of the parish) is a question we have to leave to him. We do not think cottages and lands are altogether a remedy, for we see men leaving parishes that afford them everything they can ask—good wages, good houses, and good allotments. We do not want to see bad trade in towns, but a slack time in the great centres of industry would have a great effect in repopulating our country villages. We fancy a man would rather come back to the old home than try his fortunes further afield, especially if he has a family.

Work on the Home Farm.

The ravages of the caterpillar of the diamond-backed moth are much more widespread and serious than we had supposed. The moth itself had not been so generally observed, but no one can fail to notice the work done by the larvæ. All kinds of nostrums are put forward for dealing with the pest, but we believe nitrate of soda, combined with showery weather, to be the only possible antidote. The caterpillar during its growth requires a certain amount of food. If the leaves of the Turnip are large enough to supply that food, and a little to spare, the crop may be saved, but if the leafstalks are eaten down to the heart the plant is ruined. Scuffling does good, as many caterpillars are shaken to the ground and buried, but towards the end of the visitation the plants may become so weakly that very little will uproot them, and scuffling must then be very carefully done. Would a good dressing of soot, applied immediately after rain, do any good? It is a good thing for warding off slugs, and perhaps might be useful in this case. The difficulty might be in the "after rain," for, in spite of one good shower, the drought is practically unshaken, and the renewal of the heat wave in the States does not promise well for us as regards the longed-for rain. A large flock of ducks might do much good in eating up the caterpillars, but they will hardly be available in numbers sufficient to deal with any large area. Apart from the diamond-back attack, the Turnips are doing well, and, given a fair amount of moisture in the future, will be good crops.

Potatoes are suffering terribly from the drought; second earlies are almost dead, and will do no more good, the yield being very small. Maincrop varieties need an immediate and copious rain, or they will also be a failure.

Pastures are browner and, if possible, more bare, and the outlook for owners of live stock is very gloomy. Sheep are down 10s. per head; cattle, both fat and lean, are almost unsaleable, whilst the uncertainty about the root crops must have a depressing effect on the rapidly approaching lamb fairs.

The grain crops are drying up rather than ripening, and harvest will commence in a few days. Wheat may yield well, the ears being well set with Corn, but Barley has a great many badly developed ears, and will certainly lack weight, though the colour may be good.

U.S. Wheat Crops.—Reports from the United States say that the spring Wheat crop has been seriously injured by drought and intense heat; but, even allowing for a large reduction from early estimates, the total of winter and spring grain is still put at about 700,000,000 bushels, a quantity equalled or exceeded only once before—namely, in 1898, when the commercial reckoning after the crop had been distributed was 710,000,000 bushels.

Grouse Prospects.—Reports as to the prospects for "The Twelfth" from correspondents in different parts of Scotland state that the outlook for sportsmen is very bright, the season having been a most favourable one for all classes of game. Grouse are reported to be plentiful, though not quite so abundant as last year, which was a record year. Disease among the birds is mentioned as having occurred in one or two counties, but, generally speaking, that is not regarded as of much importance.

Trade Catalogues Received.

- Wm. Cutbush & Son, Highgate, London, N., and Barnet, Herts.—*Hyacinths, Tulips, for 1901.*
T. Methven & Sons, 15, Princes Street, and Leith Walk, Edinburgh.—*Bulb List.*
Ant. Van Velsen & Co., Wilhelmina Park, Haarlem, Holland.—*Descriptive Catalogue of Flowering Bulbs.*

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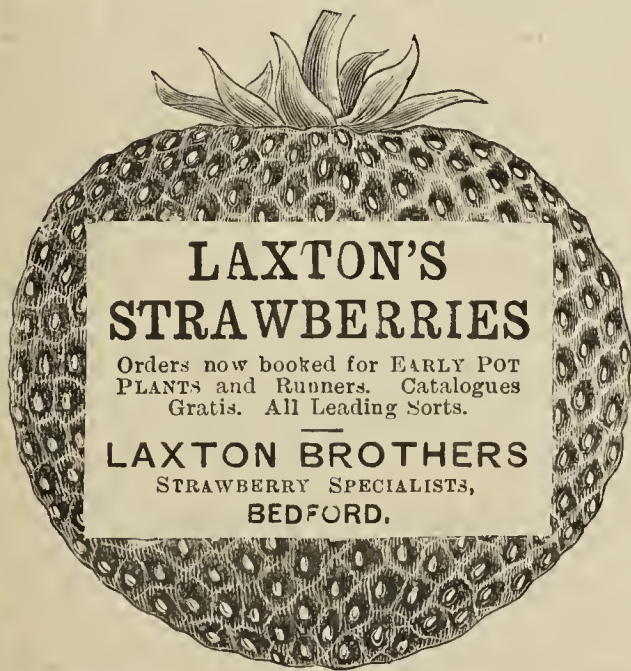
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Journal of Horticulture.

THURSDAY, AUGUST 8, 1901.

Experimental Gardening.



OW much we are indebted to experiment for the remarkable developments of this age is an open question, but there is no gain-saying the fact that it has played a very important part in the advance of horticulture. The term, in its simple meaning, is often misunderstood, for, governed as we are to a certain extent by forces over which we have little or no control, every operation we undertake, every seed we sow, or plant we cultivate is, in a measure, an experiment, and it is the lessons learned in simple, everyday matters that have led on to much greater things. We sow seeds, but have no guarantee that they will germinate and form plants. We do not know for certain that the cuttings we insert will strike root, but from past experience we can make ourselves reasonably sure of it, if the necessary conditions are favourable, therefore these and other commonplace operations cease to be experiments as the term is generally understood.

But experiment has a fascination for almost every gardener, and though perhaps they would unwillingly admit it, there are few who do not like to leave the beaten track of custom and try methods of their own devising for the sake of finding something out, or making a saving in the way of time and labour. Scores, yea hundreds, of experiments are conducted on a public or quite private scale during the course of a season, the majority of which, perhaps, are known to none except the persons who try them. But it is this mystic spirit running through the gardening fraternity that is at work. In some cases it rests apparently unseen, in others it bubbles forth at intervals, and in others again it is a hobby, sometimes amounting to a craze. Some experiment in one direction, some in another, but in all cases they are, and have been, men, not content with accepting things as they are, but always probing beneath the surface of the actual with the hope of drawing a prize from the lottery box of the unseen. How much we owe to the spirit of inquisitiveness the annals

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to 'THE EDITOR,' at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address

of horticulture, and the wealth of useful and beautiful objects in cultivation, sufficiently testify.

The hybridist stands forth as one of the greatest experimentalists in matters dealing with gardening, and his developments are remarkable. Without his efforts the horticultural world would be destitute of many beautiful, interesting, and useful plants, and the knowledge of what has been done, coupled with the possibilities that the future holds out, urges him on in the fascinating work of introduction. In the past he has had certain rules to guide him, and to some of these he still adheres; but the principles were not infallible. We are told that the hybridist has upset some of the theories of the botanist, and has, as a result of experiment, thrown many new lights on the possibilities held out by different families of plants for development. When, however, one takes the trouble to get behind the scenes of the hybridist's work it is found that, from beginning to end, it is possessed of a large element of uncertainty. Perhaps this is where the great charm of the work lies, and you can realise it to some extent by placing yourself in the position of the hybridist. Two plants possess certain features which lead you to think that, by crossing them, may be jointly imparted to their progeny. There is a possibility of it, but not a certainty, and in order to arrive at any proofs you must experiment. And it may all end in nothing—your trouble, labour, and care be thrown away so to speak, for Nature, though lending herself readily to the arts of man, will not be dictated to, and how carefully the progeny of the two parent plants is watched until the long-looked-for flower or fruit appears, and you learn the result of the experiment. This is the common lot of all hybridists, no matter on what plants they work—and even the most successful admit that the percentage of failures is far in excess of the successes; but the possibility exists, and when the cross is effected and fixed, and a new plant makes its advent into the horticultural world, all the doubts, disappointments, and failures are forgotten in the exultation of success.

Amongst those who have experimented in this direction there are names of hybridists who stand head and shoulders above their fellows, and gardeners are greatly indebted to them; but at the same time it should be remembered that men in humble spheres have experimented with lasting results, and many of those who enjoy the fruits of their efforts do not even know to whom they are indebted. Like some wonderful inventors who have died in obscurity and unrewarded, the introducers of several of our most valuable plants never received fame or financial return parallel to the value of their work. For instance, Samuel Bradley, gardener at Elton Manor, Nottinghamshire, introduced that valuable Strawberry Sir Joseph Paxton, and, after all, I am not sure whether he did not do as much for the horticultural community, by so doing, as the great gardener after whom it was named, though the latter got a knighthood. Again, everybody knows Cox's Orange Pippin Apple, but comparatively few have heard anything of Mr. Cox, the amateur experimentalist who, as a result of his dabbings, presented us with what is perhaps the finest dessert Apple in existence.

Even amongst the uneducated, rough-handed tillers of the soil experimentalists are to be met with, and occasionally they effect something, though possessing only a rude knowledge of the principles of hybridisation. Some time ago a ploughman called my attention to his collection of seedling Potatoes that he had obtained by cross-fertilising the flowers, and raising plants from the seeds. They were a mixed medley lot when I saw them, no bigger than marbles, and varying in shape and colour. But the ploughman was proud of them, for they were the result of his own experiment, nor do I think he has been altogether disappointed, for since then I have received a photograph of a fine-looking basket of tubers, obtained from one of the seedlings in question.

Since the introduction of so many forms of concentrated manures a great field has been opened out for experiment. The school of gardeners who clung tenaciously to the well-tried dung, and would see nothing beneficial in concentrated manure, has nearly died out, and there are few who do not recognise the value of fertilisers in this form, when of a suitable character and properly applied. But how are they to find out their suitability? Experiment is one of the best means. A knowledge of the chemistry of the soil and the food requirements of the crops grown are helpful, but it appears that only actual application can supply conclusive evidence. Over and over again the results of experiments with artificial manure have been given in the Press, but they are so conflicting that there is not much to be learnt from them. Season, character of soil, situation, and class of crop, all make differences, and, after comparing the results of different experiments, the man who would benefit by them finds that he has got to make another of his own in order to satisfy himself. I think more of this might be done with advantage. The guiding principles are not hard to master, and artificials now play such an important part in the economic manuring of both garden and farm, that every grower may be an experimentalist in a small way, and the work is both interesting

and instructive. In most cases the men who abuse artificial manure are either those who have never tried it at all, or else in their ignorance they have applied it wrongly or entirely out of proportion. Those who are guided by the principles of science, and apply them in practice by experiment, are to be commended, and should be encouraged. I have watched the proud gleam in the eye of a cottager-gardener as he has surveyed his full crop of a certain vegetable, before going on to say that he owed his success to the result of a little experiment, tried in a small way years ago, by which he determined the best line of treatment.

In most gardening operations we are obliged to experiment to some extent, particularly in the selection of varieties. In a recent article on the culture of early Potatoes, your able correspondent, "N. H. P.," tells of his unfortunate experience through trusting to a novelty in the way of varieties. By his own admission, however, it taught him a lesson, and the wisdom of experimenting. Now he tries a few new sorts every season, but only in a small way, to be increased or discarded according to the manner in which they acquit themselves. "N. H. P." advised others to do the same, and the practice is a good one. So peculiar is the Potato in its likes and dislikes, that a variety which turns out well in one district may be an entire failure in another, hence the necessity for every grower to experiment for himself before planting a fresh sort on a large scale.

"This is a little experiment of my own." How often one hears this remark when walking round the garden under the charge of a fellow practitioner, and it is indicative of a real interest, an anxiety to probe into things, and to put material to the best advantage. Like every other hobby it may be ridden to death, and the man who experiments with everything, but accomplishes nothing, is never a success as a gardener. The best results in horticulture are not obtained by perpetual dabbings; experiment therefore to learn, and having acquired the knowledge, let it bear its fruits by sound practical application.—G. H. H.

Jottings on Pines.

Cleansing the Houses and Beds.

CLEANLINESS is of the highest importance as essential to health and high class produce. Bottom heat promotes certain and speedy work in Pine culture, hence the first thing seen to is the bed. If the bottom heat be afforded by hot-water pipes, the material forming the bed, whether of tan or leaves, should be removed at least once a year, or insects, particularly woodlice, rapidly increase; the material also harbours other predatory vermin. All brickwork must be scalded and brushed with hot limewash, the woodwork and wirework thoroughly cleansed with soap and water, using a brush, keeping the scapy water as much as possible from the glass, which should be cleaned inside and outside with water only. If necessary, the wood and wirework may be painted, and the roof made as watertight as possible. Beds that are chambered, having hot-water pipes covered with slate or other material, are much in advance of those surrounded or passing through beds of rubble. Those composed of the latter should be turned over, and any dirt or small parts removed to allow the heat given off by the hot-water pipes to penetrate evenly through the whole of the bed. Provide fresh tan in other cases, and if wet turn it occasionally on fine, sunny days. With hot-water pipes beneath, about 3 feet depth of tan is ample; more will be needed where such aid is not obtained.

Potting.

Suckers started in June will soon have filled their pots with roots, and must be shifted into larger size before the roots become closely matted together. Queens should have 9 to 10-inch pots, and those of stronger growth 11-inch pots. Water the plants immediately after potting, and plunge them in a bed having a temperature of 90° to 95°. There is no greater mistake in growing Pines than crowding young plants, as they become drawn and weakly instead of having a sturdy base. Attend to the bottom heat of beds that have recently been disturbed or upset by the removal or replacing of plants, not allowing the heat to exceed 90° at the base of the pots without immediately raising them, as too much heat will disastrously affect Pines in fruit or those having the pots filled with roots.

Examine the plants for watering about twice a week, and maintain a moist, genial, well-ventilated atmosphere. The climatic conditions are now so favourable that Pine plants grow vigorously, therefore discontinue shading, admitting air plentifully when the temperature ranges from 85° to 95°, affording fruiting plants a night temperature of 70° to 75°, and to succession 65° to 70° at night. Reserve, if possible, more suckers for starting at the commencement of September.—PRACTICE.



Cypripedium × Mandlæ magnificentum.

This is one of the prettiest hybrids in existence. It is a "far-fetched" variety, having resulted from callosum Sanderæ × Lawrenceanum Hyeaenum. The pouch is perfectly green, a soft and beautiful shade, the broad sepals and dorsal petal being finely lined with white. They are large, too, and the plants, with nicely mottled foliage, are apparently very vigorous. It received a first-class certificate on July 30th, when shown by G. W. Law-Schofield, Esq. (gardener, Mr. G. S. Hill), New Hall, Hey, Rawtenstall.

Notes on Cattleyas.

Experienced growers may think that the culture of Cattleyas has been so well thrashed out that nothing new can be said upon it, but there are always new beginners in this, as in other cultures, and this must be my excuse for referring to it. First as to temperatures. Cattleyas are often mismanaged by being grown in too great heat and a close atmosphere. They like plenty of air moving about them on all possible occasions, and an atmosphere well tempered by abundant moisture; but to keep on pressing the fire heat and damping without air in plenty is wrong, and if persisted in will cause weak flowerless growth.

It is not much use giving figures to work to exactly, but 55° may be regarded as a good winter minimum. In very cold weather a drop of 2° or 3° may do no harm; in fact, it is better to allow it than to press the fire heat unduly, but the nearer this figure is kept to the better. A rise of 5° on dull days, and another 10° by sun heat, will be well until the outside temperature rises, when naturally the heat must advance with the season; but at no time should the night temperature be high, Cattleyas, above all other Orchids, liking a cool restful temperature at night, 60° being the maximum when possible. Ventilation is an important phase of culture. It is common enough with beginners to allow their houses to remain closed until the temperature has reached a certain point, and then to rush a lot of air on. This is a great mistake. A chink of air should be allowed the very first thing in the morning—in hot weather a little may be left on all night—and this must be increased by degrees a very little at a time, so that the temperature inside the house rises gradually and naturally. Treated in this way the plants will not require shading so early in the day as when the heat is allowed to rise rapidly.

A very good test for Cattleyas is to feel the foliage with the hand. As soon as this begins to get warm to the touch the blind should be lowered and kept down until the sun is leaving that part of the house. The afternoon blind in houses running north and south

should be lowered as the sun peeps over the ridge, and kept down until closing time, when the house must be thoroughly damped and shut up, the blinds also being raised. After a house has been closed for the afternoon it ought not to be opened again until evening if this can be avoided. If it is necessary to enter let the door be closed at once, and if at all dry, moisten the floor again.

The compost for Cattleyas, as well as the receptacles in which they are grown, must vary according to the habit of the plant. No one would think of giving a large pot, and consequently a thick body of compost, to a small-growing species like *C. citrina*; nor, on the other hand, would it be wise to place vigorous species like *C. labiata* in very small pans or on blocks. But the majority of Cattleyas are strong-rooting Orchids, and like a rough, open, make-up of compost, that the roots can enter freely, and that dries fairly quickly after watering. Good Orchid peat, broken in lumps as large as a pigeon's egg, and an equal quantity of clean, freshly gathered sphagnum, will form the bulk, and a liberal sprinkling of rough lumps of potsherds and charcoal will serve to sweeten the whole and keep it in a sound mechanical condition.

To keep the species to their proper routine of growth, flowering and rest, is a step in the direction of success, and each separate plant

has to be considered. To take two of the labiata group as instances, *C. Gaskelliana* and *C. Mossiæ*; the former of these makes up its growth in early summer, flowers upon the new pseudo-bulb, and then takes its rest; *C. Mossiæ*, on the other hand, rests during the winter with the flowers in sheath, flowers in summer, and makes its growth afterwards, so that while *C. Gaskelliana* is growing *C. Mossiæ* is resting, and *vice versâ*.

C. Trianae is a winter bloomer, and has the advantage of the whole of the spring, summer, and autumn to form and consolidate its growth. This, too, rests awhile in sheath, like *C. Mossiæ*, while the old autumn-flowering *C. labiata* comes nearer in style to *C. Gaskelliana*. *C. Percivaliana* and *C. Mendeli* always rest more or less while the flowers are forming, while *C. gigas* and the varieties of *C. Dowiana* and *C. aurea* bloom on the top of the young growth.

These and other peculiarities of the various species should be kept in mind, and allowed for, by those who wish to become successful cultivators.

It would be folly to

attempt to dry off, or even reduce the water supply, to *C. Mossiæ* after flowering, for reasons given above, but it would be quite correct to do so to a limited extent with *C. Gaskelliana* and *C. labiata*. The pretty *C. citrina*, mentioned above, is rather peculiar in its habits. The most of its growing is done in the winter, when other species are at rest, while in summer it enjoys a long period of quiescence. During the latter season it is impossible to keep it too cool, and if only those who give it a home in stuffy hothouses would hang the plant in an airy moist house from May to August, they would probably have less fault to find with it.

Of quite a different character is the heat-loving *C. superba*, one of the grandest coloured species in this fine genus, but unfortunately one of the most difficult to keep in health for any length of time. Contrary to the accepted idea that a very poor and thin root run is



CYPRIPEDIUM × MANDLÆ MAGNIFICUM.

necessary for it, I have been most successful with *C. superba* in a fairly large pot, and a greater thickness of compost than usually given; but I may say that I looked closely after the plants myself, and whenever the watering has to be done by inexperienced assistants or careless ones, then the thinner the compost for *C. superba* the better. And the quality of the compost must also be good and lasting, so that repotting will not often be required. Frequent disturbance at the root is the bane of many of these somewhat fastidious species. The East Indian house is the best place to grow *C. superba*, and ample sunlight must be allowed in autumn to ripen and consolidate the growth made, enabling the plants to pass the winter in safety. Rest during the dark days is absolutely essential to this species, plants with leads moving sluggishly at a time when the conditions are unfavourable never keeping long in health.

Next to *C. superba*, perhaps, the species requiring most heat is *C. aurea*, or more correctly *C. Dowiana aurea*. Hung up close to the glass, almost in the full sun, and with abundant moisture in the atmosphere, no trouble will be found. The pans need not be large, as though fairly vigorous the roots grow more closely together than those of some others. When the sheath of this species is forming there is often a great deal of glutinous matter about it and the leaf that prevents the free access of the flower spike. This should be removed by sponging it off with hot water, or many spikes will be lost. It may be necessary in extreme cases to use the haft of a budding knife and so free the spike. The same applies to *C. gigas*, and also the fine natural hybrid between these two—viz., *C. Hardyana*.

So far I have not touched upon the group of species with erect cylindrical stems and a pair of apical leaves, such as *C. intermedia*, *C. amethystylum*, *C. guttata*, and *C. bicolor*. But these do not differ greatly in their likes and dislikes from the labiata group, and as this note is already rather long, these may be left for a future occasion. Great care is necessary in spring to avoid damping of the young growths, and, like those of the labiata group, they must be kept to their proper annual routine.—H. R. R.

Zygopetalum Mackayi.

It may be thought that the subject of our illustration on page 123 is too well known. But can we have too much of a good thing? Well, sometimes yes. *Zygopetalum Mackayi* is smaller than *intermedium*, and has sepals and petals pale in colour; the vein-like lines of the lip are coloured deep blue. We have seen it stated that the true *Z. Mackayi* is rare, but so nearly does it approach to *Z. citrinum* and *Z. intermedium* that these pass for it. The original plants were brought from Brazil in 1827. It is the type-plant of the genus, and from it Sir Joseph Hooker described the generic characters. *Zygopetalums* are limited in numbers, and, so far as our experience goes, they are amongst the easiest of all Orchids to cultivate.

The Gardening Handy Man.

EIGHTEEN shillings a week, that is his pay, and he is well satisfied with it. His weekly wage is not the entire source of his income, for attached to his cottage there is a large garden, which gives some returns over and above the family requirements, and behind the tenement there are two little fields, just enough to keep a cow and rear a calf, and every Wednesday morning a stout female figure may be seen trudging her way to the neighbouring market with a basket on each arm, containing the results of yesterday's churning. She is a happy soul, and though the effect of hot days, low prices, and melting butter somewhat depresses her spirits, she says, "Ah, well-a-day! we've seen the likes afore, and wus, so it's no good o' grumblin'."

I am writing of a garden labourer, just a single specimen, picked out of the hundreds scattered about the country, that are treasures in more respects than one. No one knows the value of a good labourer better than head gardeners, to whom the former is an untold blessing. The conditions of his employment, or his association with horticulturists, raise him above the ranks of his fellows, and long experience makes him conversant with the routine of the garden. He is in a position to render valuable assistance to the head gardener when the latter takes over a new charge, and, let it be said in fairness to him, that the head man sometimes gets the credit for that which the labourer has accomplished. With a staff of good labourers to carry out his commands, the head gardener is saved a deal of anxiety and worry, and by a good labourer I do not refer to simply a working machine, but a man who brings intelligence to bear on the fulfilment of his duties, and knows when and how a certain task should be done without having to be told.

And now let me return to my example. Old Joe, as everybody

calls him, is one of the best specimens of a garden labourer I have ever met. Indeed, in his way, he is a bit of a genius, and I have often thought it a pity that his lot was not cast in a line of life offering more scope for his abilities. But Joe has no regrets in this respect. Like the rest of Englishmen, he possesses a knowledge of his capabilities, and woe unto the younger man who attempts to teach him. About gardening under glass he knows nothing, never did know, and doesn't want to know. He says that department belongs to the young chaps with stiff collars and blue aprons, and he is quite content to do his bit outside. But Joe is a thorough handy man, and even the glass department is not independent of him, for whenever a leaky joint wants caulking, or anything goes wrong with the heating arrangements, there is a cry out for Old Joe, and from some unknown place he unearths the necessary implements and generally puts matters right. Joe knows something of the principles of heating with hot water, but he rarely argues the theory of the thing. With him it either "wull work" or it "wunner work," and usually his decision is correct. He doesn't profess to be a bricklayer, but the work does not come amiss to him, and among his store of tools there are a few trowels and other implements ready in case of emergency, and if a frame wants building or a wall put up, Old Joe is the man for the task.

The labourer's knowledge of the world at large is not extensive. He has been to the seaside several times, and once to London; but apart from that he has not travelled much. His experience is confined to the little world around him, and within its limits he is an authority. Though he was not born in the garden where he labours, Old Joe first saw the light within a short distance of the place, and the greater part of his life has been spent within its precincts. Naturally enough he knows a good deal about the establishment, has seen many changes, and is never loth to talk about them. He discusses the capabilities of the various gardeners under which he has worked, and remembers scores of young men who have spent their few years of probationship as tenants of the bothy. One by one his sons came into the gardens as they grew old enough, and then passed on. They are now head gardeners, and Joe is more than a little proud of them. Like most of the labourers, the old man has his favourite jobs, and one of them is bedding. In the palmy days of carpet bedding there was a lot of it done in the establishment of which I write, and Joe proved himself to be an adept at the work. He knew nothing of drawing, but some of his designs were works of art, and even now he has an eye for symmetry such as few men possess. I have watched young men work beside him, and attempt to keep pace with him, and at times they looked like leading, but the regular plod of the experienced hand told its tale, and before evening he was always ahead.

And no task seems to come amiss to Joe, whether it be making a tennis court or forming a new garden. Rough and uneducated though he is, his ideas of landscape work are excellent, and if left to carry them out without interference he never fails to produce a satisfactory result. I know of more than one head gardener now who has reason to be thankful that he was sent as a youth to work "along with Old Joe." It is all very well to talk about horticultural education, but, after all, practice is the best of schools, and strange though it may sound, some of the ablest teachers may be found in labourers of the type of Old Joe, who teach not so much by their precept as by the way they do their work. Though 18s. per week is not a princely income, the man is not bad off, and is contented. His work, his home, his garden, and his little farm are all part of his life, and with them his anxiety ends. When the clock strikes six in the morning he is at his work; when it strikes the same hour again in the evening he leaves it, as he has done week in, week out, for the greater part of his life, wishing for nothing better, and making the best of what he has. There are many men like him in the horticultural world, and though we know them as labourers only, both gardeners and gardens would be poor without them.—G.

Single-flowered Hollyhocks.—These flowers are so conspicuously distinct and beautiful, that they have never gone out of fashion; but of late years many growers, especially on hot and dry soils in the south of England, have had to discard them on account of a fungoid pest known as the "Hollyhock disease." We have found that by rearing seedlings every year, and planting them as far as possible in new or fresh soil, they have flowered well, and they are so varied in colour and so handsome that no other flowers can quite replace them in big borders. Mr. George Massee, who is the fungus expert at Kew, is of opinion that kainit is one of the most efficient of all fungicides, and, being likewise a manure, it should be useful to all who grow Hollyhocks and other garden flowers likely to become infested and fail owing to fungoid disease. Even if this fertiliser only enabled us to again grow the Hollyhock in our gardens successfully it would be an enormous boon, and cultivators generally will do well to act on Mr. Massee's special knowledge and advice in all cases where fungus in the soil is a trouble or annoyance to them.

Shanking of Grapes.

THIS is, perhaps, the most tantalising of Grape Vine defects. The cause of shanking is unknown, though the most experienced cultivators regard it as intimately connected with nutrition, inducing a morbid condition. Suspended root action at the critical period, when the Grapes change colour for ripening, has been assigned, but it frequently occurs where the roots are active in the surface dressings or mulchings, yet the main roots are generally in an unsatisfactory condition through the closeness of the border or lack of gravelly matter in the soil to keep it sweet and afford a suitable rooting medium and available wholesome food. What the exact defect or excess of nutrition is no one appears to have any clear idea, though organic acids have been found abundantly in shanked berries, and these, probably for lack of neutralising by mineral substances, lie at the root of the evil. It seems strange, however, that the acids do not affect the shoots of the Vine, causing them to shank.

Indoor Vines have prepared borders. Are they composed of too rich materials, the organic matter disproportionate to the mineral components? or are the border ingredients of too close and compact nature, so that air is precluded and soddenness and sourness inevitable? Truly, something is wrong at the roots of the Vines or shanking would not appear in the berries. This is clearly indicated by the steps taken to avoid it—namely, properly made borders of soil of suitable staple, with thorough drainage, and well-managed Vines, for the roots are simply food imbibers and transmitters. But it is all-important that the foliage be fully exposed to light, for the value of the food depends on the power of elaboration, hence root-action and leaf-action must be reciprocal. Excess of foliage or crowding of growth hinders elaboration. On the other hand, keeping from first to last as much foliage as can have due exposure, and no more, in a healthy state favours elaboration and the storing of matter essential for the perfecting of the current crop, and insures the maturation of wood and buds for the producing of the next year's.

The young growths must be well regulated, adopting the extension rather than the restricted system, where there is room for it without crowding. The only remedy for shanking, where border and drainage is bad, is to lift the Vines, providing efficient drainage, and forming a border of suitable materials. Heavy coatings of manure in autumn or winter, if allowed to become soapy, sodden and sour the soil, and exposing the surface to the heat and drought are certain means of securing shanked Grapes. Souring the soil with liquid manure whilst it is saturated and cold destroys what few norelets remain, and the Grapes shank. Sometimes the sourness may be overcome by dressings of air-slaked lime, 1 lb. per square yard, or basic cinder phosphate, 2 lbs. per square yard, the latter not only supplying lime, but also phosphoric acid, some magnesia (an essential Vine food), iron, and manganese (important constituents of the best soils for Vines).

Defective nutrition unquestionably gives rise to shanking, or rather the evil is commonly a result of error in treatment; for when Vines have a porous soil and free drainage, proper supplies of phosphates, sulphates, nitrates, and chlorides of potassium, calcium, magnesium, and iron, the Grapes do not shank, the crop not being overburdensome, and the foliage not scorched or destroyed by red spider or other pests. Such mineral elements as those quoted are necessary in order that the Vines may build up their structures healthfully. The artificially compounded fertilisers contain Vine food in suitable form, and it is well known that where there is a judicious use of them there are fewer Vine ailments than under the old régime of surfeiting with stable manure.—G. A.

Preserved Figs.—Gather the Figs with stems just before they are ripe enough to be eaten; keep them in salt water for twelve hours; take them out and put them in fresh for three days, changing the water every day; make a thick syrup with a little Lemon juice and the rind of the Lemons in it (or ginger), put in the Figs and let them boil until done, then put in jars.

Gadding and Gathering.

"HERE 'AWA, THERE AWA."

Edinburgh Notes.

"WILLIE" has wandered far this week. He settled himself in a north-going train on Friday last, and early on Saturday morning formed one of a multitude who all but usurped the famous streets of Scotland's capital. There are no such things as "gentle zephyrs" that cool a heat-burdened air here; but instead there are half hurricanes that nearly blow cabs over. Yet the saying of an English friend to whom I spoke this afternoon, and who now enjoys a comfortable post at the Botanic Garden here, is very true. He said that a person can do a good day's work in the cooler air of our more northern clime, and at the end of the day still feel able for any private business one may require to do. In London with its compressed, oven-like atmosphere, which in summer continues day after day, and week after week, debilitates even the strongest, and labour or exertion of any sort is a very sore trouble. But while the state of the weather in different parts may serve as an introductory topic, we do not want to discuss it threadbare—if that *could* be.

Passing Berwick and around by St. Abb's Head, one notices that harvesting operations are already well in hand. This, for the north, is in good time, not to say early. While in Essex some three weeks ago I saw numerous acres of Rye and Barley already cut and stacked; and the same down Redhill way, in Surrey. Throughout Perthshire Oats are still very green, though other cereals are becoming tinged with the sere and yellow tinging. Rain is badly needed, as, indeed, we have heard often and often. Twice since Saturday last the elements above have been at the point of precipitancy, but the cold blasts from the West have headed off the likely showers.

The Botanic Garden.

In an afternoon stroll through these gardens, superintended by Professor Isaac Bayley Balfour, nothing pleased me more than the handsome new Bromeliad, Aroid, and Nepenthes house, with its central pathway and broad borders. In these borders one finds a very fine selection of Marantas, Alocasias, Anthuriums, Heliconias, Hoffmannias, and minor plants; while in baskets overhead are lines of numerously adorned Nepenthes. As I will have more to relate about this splendid house later,

I may save space now and refer instead to a very few subjects in the corridor and other houses. *Romneya Coulteri* is here grown upon a back wall, and appears to have been flowering moderately well. *Mitraria coccinea* flourishes more vigorously than is its wont, and would seem to favour the planting-out system. *Bauera rubioides* may also be seen screening part of the corridor wall, with its roots in a narrow border, and is quite a mass of pretty rose-mauve flowers. As a rule this little hardwood is subjected to the confine of pots. *Oxypetalum coeruleum* is but rarely seen, yet if it can always be depended upon to be so floriferous as it is here, one should expect to find it in every garden.

Cestrum aurantiacum with its orange flower trusses has very many fine qualities to recommend it, and none more in the cultivator's eye than that it grows readily and flowers most freely. *Malvastrum grossulariæflorum*, with pretty Malva-like flowers, attracts observation, as also does the beautiful climber, *Rhodochiton volubile*, with saucer-shaped rose-mauve blossoms.

The foregoing are all upon the corridor walls. In one of the open borders in the large cool conservatory, the handsome masses of *Restia subverticillatus*, a beautiful grassy plant of plume-like mien, is very handsome indeed. I noticed the recently introduced *Arctotis grandis*, with silvery-lilac flowers, upon the stages, and near by it were charming masses of the orange-scarlet *Chironia ixifera*. *Solanum pyracanthum*, with brown-spined leaves, added piquancy to the composition. *Hibiscus Manihot* and *H. Huegeli*, the former with primrose flowers, the latter with lavender blue, are both beautiful and uncommon. *Tacsonia exoniensis*, having rich crimson flowers, furnished a dazzling mass of colour overhead, while *Solanum Wendlandi* is as perfect here as in its best conditions elsewhere; *Nemesias* are also brilliant. But perhaps the foregoing will suffice as a first instalment.—WANDERING WILLIE.



ZYGOPETALUM MACKAYI.



Gooseberry Cobham Seedling.—A variety with exceedingly large fruit, oval, slightly hairy, greenish-yellow in colour, and conspicuously veined; flavour rich and tasty; a first-rate dessert Gooseberry. It received an award of merit on August 30th, when shown by Mr. T. R. Cuckney, Cobham Hall, Gravesend. See figure on page 138.

Lonicera etrusca.—Although hardy, better results are obtained with this plant by growing it in a cold greenhouse or corridor, growth being stronger and the inflorescences correspondingly finer. It is a native of Southern Europe, and is sometimes seen under the name of *gigantes*, which name, however, is but a synonym of *etrusca*. In general appearance it makes a strong climber, growing to a height of 20 or 25 feet with slightly glaucous, oval leaves and very large terminal inflorescences of fragrant yellow flowers. It succeeds in good rich loamy soil and flowers throughout summer and early autumn. At Kew a fine plant is flowering in the Himalayan house.—K.

Carnation Sir R. Waldie-Griffith.—This is truly one of the most distinct and superior self Carnations we have seen this year. Half a dozen beautiful blooms reached us a few days ago from Messrs. Laing & Mather, Kelso-on-Tweed, and these we were quite delighted with. The stout, smooth petals possess a satiny surface, and very finely sinuous edge. They are faintly Clove-scented, but the colour is the remarkable character. This is a rich shade of orange scarlet with a suffusion of amber. The blooms are large, handsomely formed, and have a non-splitting calyx. We learn that it is quite hardy in the open grounds at Kelso, and is a variety of vigorous growth and good habit. It was named with the cordial consent of Sir Richard Waldie-Griffith, Bart., and exactly matches his racing colours. Stock plants are being sent out this autumn.

Seasonable Hardy Flowers.—Amongst the hardy flowers now blooming, and of outstanding merit, are *Erigeron speciosus superbus*, which grows in bushy form about 2 feet high, having numerous large sized flowers of a true lavender colour. *Helenium autumnale pumilum*, with yellow composite blooms, is also dwarf and very floriferous, forming a good subject to mass in a bed. *Lythrum Salicaria*, the common purple Loosestrife, and its dwarfed rosy coloured variety, bearing the specific name of *rosea*, are two members worth including. There are a whole regiment of *Campanulas* both tall and dwarf, but none excel the Chimney Bell-flower, *C. pyramidalis*. *Catananche cærulea*, with deep and pure blue flowers, one of the *Compositæ*, is, like many other useful and beautiful plants, left out of our hardy plant borders, and varieties of florists' flowers are substituted. *Lysimachia punctata* and *L. vulgaris* are both much used for the decoration of outlying parts of kept grounds. In masses or clumps they are very valuable and showy. *L. clethroides*, with somewhat downward curving white-flowered spikes, and growing about 2½ feet high, is also a "taking" subject.

Catalpas at Kew.—The various species of *Catalpa* at Kew have this year flowered with exceptional freedom, the old specimen near the ferneries of *bignonioides* and the younger and smaller examples in the collection near the temperate house having one and all been smothered with flowers. The genus itself is interesting in supplying the only hardy tree *bignoniads* for our gardens, while for ornamental qualities it has few equals. Four species are in cultivation at Kew, all of which bear a close resemblance to each other in shape of leaf and colour of flowers, differences, however, being noticeable in size of leaves and blossoms. *C. bignonioides*, hailing from the Southern United States, is the best known species, its large, handsome, heart-shaped leaves and terminal panicles of large, white, yellow, and purple marked flowers making it very useful and popular in gardens. In addition to the type a very ornamental variety is in cultivation called *aurea*; its principal characteristic is its handsome golden foliage. The other species in cultivation are *Bungei*, from China; *cordifolia*, from Western Kentucky and Tennessee; and *Kämpferi*, from Japan. When very young, *Catalpas* are inclined to be a little tender through making long sappy shoots, consequently they should not be planted in too rich soil.—W.

Alstromeria aurantiaca.—This is one of the most brilliant of all yellow or orange-coloured flowers at the present time, great clumps and masses at the base of a hot, dry, and sunny wall being most beautiful. It is very easily reared from seeds sown as soon as they ripen near walls, or in other positions where they are to bloom. Apart from its effective and bright appearance in the flower garden, its flowers endure fresh and fair in water indoors.

The Pheasant's Tail Grass (*Apera arundinacea*).—Nearly all Grasses are more or less elegant in form and beautiful, but this is one of the best of them, and its graceful tufts are now bearing its warm brown or glistening purple plumes amongst its slender leaves. Easily raised from seeds sown as soon as they ripen, it grows freely, and is an effective plant at all seasons of the year. Cut when about half grown; its tail-like plumes dry beautifully, and later on in the year its leaves take on a reddish bronzy hue, and are very useful in that state for the winter flower-pots and vases.

Statice.—These are in no way particularly showy, yet they are generally included in all collections. At present we have in bloom *S. incana* and its dwarfed variety *nana*. They produce spreading cymose heads of rose-lavender flowers, rather inconspicuous, of course, but, being numerous, they do furnish a measure of effect. For drying they are commendable. *S. Suworowi* is quite distinct, having long Plantago-like spikes of rose-purple or rose-mauve flowers growing a foot high. One of the tallest (being over 2 feet) is *S. Limonium*, with spreading and much-branched cymes of lavender-blue flowers. *S. latifolia* is known to all as being an attractive and useful plant; it is intermediate between *S. Limonium* and *S. incana*. *Statice Heldreichi* has white flowers; and so has *S. Limonium album*, which, however, is not yet fully in flower.—KEWENSIS.

Passiflora racemosa.—This is one of the most useful and showy of the Passion-flowers, and one which is worth cultivating largely. It is a Brazilian plant, and was introduced as long ago as 1815. Usually it is planted in a tropical house, but it grows equally well, and flowers if anything better, in an intermediate temperature, the cooler house enabling it to rest better during winter. The leaves are usually three-lobed, and rarely produced towards the apex of the branch, their place being taken by flowers. The flowers are 3 to 4 inches across, scarlet, and borne from March until the commencement of winter, the same shoot in some instances continuing to grow and produce flowers throughout the whole of that time. Its good flowering qualities have led to its being taken in hand by the hybridist, with the result that several good garden plants have been obtained.—D.

Rubus phoenicolasius.—Although in favoured places this Japanese species is hardy in the open, in most places it requires the protection of a wall or cold house. In whichever way it is grown, however, it is very attractive, whilst its fruit is very palatable. Indoors, planted in good soil, it makes shoots 15 to 18 feet long in a single season, which shoots, the following year, produce large bunches of scarlet fruit from their apex, the fruit being about as large as a medium-sized Raspberry, and rather more acid in flavour. The whole plant is smothered with viscid, reddish hairs, which give it an unique appearance. After the fruiting season is over all old fruiting wood must be cut out to throw all the energy into the following year's fruiting wood, and also to let in more light and air to thoroughly ripen the branches. Throughout July and early August two large plants were smothered with fruit in the Himalayan house at Kew.

Lilium Henryi.—Much has been written during the past few weeks in favour of this Lily, its hardy constitution and floriferous nature coming in for abundance of praise. Undoubtedly it deserves all that has been said in its favour, for it grows well out of doors, and increases rapidly in size, flowering bulbs being easily raised in three years from scales or seeds. Good, however, as it is out of doors, it succeeds better in a cold house, where it is not subjected to such extremes of heat and cold and moisture. At Kew it may be seen growing both in and out of doors, and in the former case remarkable results are evidenced. The indoor group is growing in a well-drained border of peat and loam among *Rhododendrons*, and the stronger plants range from 10 to 11½ feet in height, many of them bearing forty flowers each, whilst two exceptionally strong plants are bearing sixty-nine and sixty-five flowers respectively. For those people who make a hobby of the genus, a cool house planted with *Rhododendrons* and Lilies would be a most interesting place, and many of the choicer species would succeed under the treatment which often do badly out of doors.—W.



The Oriental and Occidental Planes.

Mr. Abbey's reference to these Planes as suitable town trees (see July 25th issue) reminds me of the several fine specimens of the Eastern Plane growing alongside one of the principal streets in Derby, and which were much admired by the Birmingham Gardeners' Association members when proceeding to Elvaston Castle recently; the long and gracefully depending branches, with their deeply lobed leaves, and the combined robust glaucous-barked boles of the tall growing specimens in question, lent a most ornamental effect, and certainly gained in contrast with the albeit younger specimens of several thriving trees of the Western Plane on the opposite side of the street, the habit of the latter being more rigid and the foliage more bluntly lobed and of a darker green colour.

It has been averred that the Eastern Plane is less hardy than its congener the Western variety, but such does not appear to be warranted by facts, inasmuch as at Harborne (situate about three miles from the centre of Birmingham), there are two fine old specimens of the former, and which apparently have never suffered from cold weather. The one is growing at the junction of three public roads, with its branches nearly reaching to the ground, and with a seat beneath affords a pleasant shade to the pedestrian; the other is growing inside of the extensive grounds of a residence near at hand. Re town trees, the Planes in question appear to be equally suitable, as illustrated by the vigorous specimens of both forming the avenue in Broad Street, Birmingham, where they were planted upwards of twenty years since. The Canadian Poplar is also an eminently suitable subject for towns, and in St. Martin's Churchyard, situate in the centre of smoky Birmingham, a fringe of thriving specimens are most effective.—W. G.

Scarcity of Journeymen Gardeners

Every now and then there is a considerable shedding of ink in the horticultural Press over the condition of the gardener. The hours he works, the low wages he receives, or the inconveniences he has to put up with, are a few of the topics discussed. Injured ones let off a certain amount of pent up steam and relieve their feelings, the communications are read with more or less interest, grievances are aired, and then the whole thing settles down again, and matters go on much as they did before. Nothing is done, very little that is practical is suggested, but these outbreaks come from time to time like an epidemic; but the man or the institution is not yet forthcoming who will champion the cause of the gardener, and bring about the desirable changes pointed to by your various correspondents. I do not think there is any need to trouble about the alleged scarcity of journeymen, they have been too numerous in the past, and head gardeners too ready to engage journeymen to do the work that ordinary labourers could readily perform. In scores of establishments there are young men, ranging, say, from two or three to a dozen, to one head gardener. They are all aspiring to the latter position, and the supply exceeds the demand, with the result that some have to be disappointed, or take small and inferior places. The scarcity of journeymen may possibly thin the numbers of candidates for head places, and raise the value of their services.

Several correspondents have recently railed against the pay of journeymen, but in this respect I think they are a good deal better off than head gardeners, in comparison. A young man from eighteen to twenty-two gets from 16s. to 18s. per week with bothy and perquisites. It does not sound much, according as artisans are paid, but how much worse off is he than a clerk or shop assistant in London, who has to pay lodgings and train fares, and appear respectable on 25s. per week? It is not the journeyman so much as the head gardener who has room for complaint on the score of wages. It certainly is a poor return for a man who has spent long years in learning his business to be offered the magnificent stipend of £1 per week, and no wonder he lets off steam in the Press when the opportunity occurs. "A. W. D." asks, "Why are gardeners' wages so low?" Many a man has pondered over that question, but he has not succeeded in raising the rate. Unfortunately a private gardener is a luxury. He is not necessary to the requirements of society in the same sense as a miner and an artisan. The private gardener cannot set a value on his services and demand a price in the same way as those who form an indispensable part of the great combination of capital and labour. Not being a commodity, he is in the hands of the employer, and as there is no great dearth of his kind he has to accept rather than demand. The gardener may chafe at his lot and air his grievances, but he can do no more, because there are others ready to step into his shoes if he gives up. It would be difficult to set a standard of wages, as it is not easy to define a gardener. It is

also a question of capital, and if a man can only afford to spend so much on his garden, and pay his gardener £1 per week, where is the remedy to come from? There is scarcely any comparison between the position of a private gardener and an artisan, and the means for each to improve his position are widely different. A coalowner, for instance, cannot do without his miners, because his own income depends on them; but he can dispense with his gardener without being financially the loser. This is the position of gardeners, and ministering, as they do, to the luxuries of their employers, their financial position can only improve when the former realise that a good man at 30s. per week is more economical than an inferior one at 25s.—H.

Nettle Stings.

I was struck with a short paragraph on Nettle stings in your issue of July 25th (page 76),* attributing the effect of the sting to formic acid. Undoubtedly the poison of many insects is formic acid, or something similar, but it has been generally supposed that the effect of the *Urtica* was caused by an alkali. In proof of this, it has been pointed out that the application of Dock leaves affords relief, which seems to be due to the oxalic acid they contain. I think there cannot be a doubt that the juices of *Urtica* contain soda or potash, and are therefore alkaline; still it is possible, I own, that an acid might be contained in the sting bulbs. Surely some competent authority will be able to clear up the matter for us. Do any plants secrete formic acid?—J. R. S. CLIFFORD.

Exhibitors as Committeemen.

I was very much surprised to read Mr. Woodgate's views. He must have been hard hit, for he gives himself away, and even mentions two of his colleagues, and the Derbyshire Horticultural Society. I believe at this society there are three committeemen-exhibitors out of seven committeemen, and the other four may as well be exhibitors, according to Mr. Woodgate's views. First let me go through Mr. Woodgate's letter. He gives me the honour of being the last out of a certain show. If Mr. Woodgate reflects, he may remember that there were three of us. A certain committeeman-exhibitor brought a dish of Peaches; he put them down, he looked round, took them away, and brought another lot. We were ordered out before he came back, and we asked Mr. Woodgate to go and bring him, and to put his cards on the various exhibits. We then went out, and on our way noticed that Mr. Woodgate's men had not finished mossing-up their group, and we were nearly knocked down by men bringing into the tent some large Ferns. At any rate, I was not in the tent to see my own stuff judged.

I must also strongly protest, though not against insinuations, but against Mr. Woodgate's use of the word "judges." Exhibitors have always to digest the verdict of the judges, and it does not matter what exhibitors may say or think, we take their verdict. I must bring Mr. Woodgate back to our heading, "Should Exhibitors Act as Committeemen?" This I maintain is what we are writing about, and I think most gardeners will agree with me that exhibitors should not be allowed on committees. Does it sound right? for "W. S." maintained they were fatal to the progress of the work of the day if there were too many of them on societies. Now we will take the schedule of the great show at Shrewsbury. This year they have altered the great Grape class, and if the Shrewsbury committee contained any exhibitor who entered this particular class, would it not appear like furnishing an advantage to him over the outside exhibitor? I will stick to my remarks that committeemen-exhibitors do look after their own interest, and I will leave it to the readers of the Journal to think whether they do or do not. I do maintain that exhibitors ought not to act as committeemen, and let Mr. Woodgate consider this, that a good and genial secretary is the making of a good show. In conclusion, I hope Mr. Woodgate will be a little more careful, and not let all the readers of the Journal know there are three first-class gardeners acting as committeemen-exhibitors, and that some of them go round with the judges to see their own stuff judged. Is not one exhibitor as good as another? The request at clearing time should be, "All exhibitors outside," and not merely "All outside, please," as Mr. Woodgate wrote.—GEORGE WADESON, *Doveridge Hall Gardens*.

[It is well to be earnest, but the tone of some of our correspondents shows an inclination to become strictly *parliamentary*—as we now know Parliament. We would, however, be loath to administer the closure, so long as there is anything useful to be said.—ED.]

Lavender, Sweet Lavender.—Within the last few weeks London has been invaded by Lavender. A swifter marauding force could scarcely be imagined; it has met one everywhere—in the streets, in the shops, in the houses of one's friends, and everywhere with the same subtle odour of many flower gardens, the same blue and grey tints it has made especially its own.

Figs under Glass.

Early Forced Trees in Pots.

As soon as the second crop of fruit is gathered examine the trees for red spider and scale, as keeping the soil somewhat drier at the roots, and the atmosphere being drier in consequence of a free circulation of air, these pests increase to an alarming extent. They are almost certain infestors of Fig trees in heated structures, and however alert the cultivator may be, these enemies get ahead during the ripening of the fruit. Therefore, when the fruit is cleared off the trees recourse must be had to cleansing, and as the foliage and wood is far advanced in ripening destructive agents may be employed at a strength that would not be safe at an earlier stage. If, therefore, these pests have made undesirable progress it will be advisable to syringe the trees with an insecticide, those advertised being effectual only if care is taken to follow the instructions. Or dissolve $1\frac{1}{4}$ lb. of softsoap in a gallon of rain water by boiling, and whilst in that state, but removed from the fire, add 1 gill (quarter pint) of paraffin oil, stirring briskly until amalgamated, then dilute with hot water to 4 gallons. When cool enough, 130° to 135° , apply by means of a sprayer (for economy of liquid), or syringe so as to wet every part of the trees, the under as well as the upper side of the leaves, and all the wood. To prevent the mixture soaking into the soil a little dry moss may be placed tied round the stem, and then a sort of pyramid of the same placed about the plants. If the wood is badly infested employ a somewhat stiff brush for freeing it of scale whilst wet. In bad cases repeat this within a day or two, afterwards syringing thoroughly with tepid water. The trees will only need water to prevent the foliage becoming limp, ventilating to the fullest extent day and night, but protect the trees from heavy rains, which have a tendency to growth instead of securing that rest essential for those subjected to early forcing.

Early Forced Planted-out Trees.

When the second crop is ripening a circulation of air will be needed constantly, more by day than at night. If dull weather and wet prevail, a gentle heat in the hot-water pipes make all the difference between well-ripened and insipid fruit. It also often makes immunity or otherwise from "spot" certain or uncertain. Watering at the roots must be diminished and syringing discontinued, but a moderate air moisture may be maintained for the benefit of the foliage. If red spider is present, and there is heat in the hot-water pipes, coat those thinly with a cream formed of sulphur and skim milk, which, by the fumes given off, is inimical to red spider, and also to "spot" fungus germs or spores. A good syringing may also be given after the fruit has been picked close, choosing a time when there is a prospect of the moisture not remaining long on the trees. As soon as the fruit is all gathered the trees may have a good washing with the syringe or engine, to free the foliage of dust and red spider, otherwise a circulation of dry warm air should be maintained in the house until the foliage commences falling naturally, and which must not be accelerated by allowing the soil to become dust dry at the roots.

Unheated Houses.

When Fig trees are grown against walls the crops are not always satisfactory, especially in a wet season, but covering such trees with glass usually results in the produce of Figs of the highest quality. Structures with a south aspect are the most suitable, and to have the trees thoroughly under command the roots must be restricted to narrow borders, one-third the width of trellis being ample, and not more than 2 feet deep, over plenty of drainage of a calcareous nature. The border may consist of good substantial loam, with about one-fifth of old mortar rubbish and one-sixth of road scrapings incorporated. The calcareous matter is essential to the formation of nitrate of lime in the soil, and sand is an important constituent in building up the structure of the trees. With unobstructed light, and provision for free ventilation, Figs of the highest excellence may be obtained, if the usual attention is given to watering and feeding with liquid manure as required. It is also necessary that the growths be thin, acting on the extension system, but securing, by judicious stopping, a fair amount of spurs, and in no case allowing more growths to be made than can have full exposure to light. The fruit is now advanced in swelling, and every pains should be taken to keep the foliage free from red spider. This may be effected by forcible syringings early in the afternoon, but do not syringe it if there is no prospect of the foliage becoming dry before night. Under such circumstances damp the border, especially in the afternoon, and occasionally with liquid manure.

Admit air early, increasing it with the sun heat, maintaining through the day a temperature of 80° to 85° , with free ventilation, closing early so as to run up to 90° or 95° , or even 100° , and when the sun is declining a little air may be admitted at the top of the house, so as to allow the pent-up moisture to escape the temperature gradually

cooling down. Water or liquid manure, according to circumstances, will be required about once a week or oftener, in order to keep the soil in a properly moist condition. When the fruit begins to ripen lessen the supply of water and discontinue syringing, securing a circulation of air constantly, and freely ventilate when favourable. Husband sun heat, which will not do any harm if the atmosphere is not confined, a little ventilation being given so as to allow of the moisture escaping instead of condensing on the fruit and causing it to crack and mould.—GROWER.

Lilies for Heavy Soils.

THERE are between sixty and seventy known species of *Lilium*, besides others which have not yet been classified, while much remains to be done in the exploration of districts, principally in China, known to be rich in the genus. Some of these sixty or seventy species, too, contain many varieties. This magnitude of the family becomes more wonderful when we reflect that the genus *Lilium* does not include many flowers we usually term Lilies—e.g., Day Lily (*Hemerocallis*), St. Bruno's Lily (*Anthericum*), Plantain Lily (*Funkia*), African Lily (*Agapanthus*), and many others. It is strange that the southern hemisphere has given us no Lilies proper, but perhaps it is not so strange that all come from the temperate zone of the northern hemisphere (except *Lilium philippinense* and two or three little known ones from the East Indies), considering that nearly all of them like partial shade and a cool moist bottom. Such being the nature of Lilies, it follows that it is possible to grow practically all of them outdoors in this country.

A factor, however, which limits the choice for the heavy soils which we are going to cater for, is, that many will only grow in peat or in a peaty soil, and some only in a swamp. But, fortunately for the English amateur who has only a clay soil at his disposal, there are some Lilies which will grow in any soil, and others which can be induced to do so with a little extra attention. Such matchless flowers as Lilies, with their stateliness, grace, and beauty of form and colour, often accompanied by a delicious scent, are surely worth a little more consideration than we give to the generality of flowers. And yet few flowers need less attention than many Lilies do when once established in a congenial soil and position. It is no unusual thing in cottage gardens, where some Lilies find such congenial homes, for clumps of Lilies to grow for a generation without being touched. The fact is, no Lilies like having their roots interfered with, however necessary it may be sometimes for manuring or division of clumps, some even refusing to show themselves above ground for a year afterwards. Yet few flowers repay more liberally just a moderate compliance with their wishes. But *revenons à nos moutons*.

First and foremost, alike the most common, and to many people the most beautiful, comes the white, or Madonna Lily (*Lilium candidum*). Such expressions, "fair as a Lily" and "Lily-white hands," must have originated when this was the only Lily grown in this country, and this must have been the extent of the introduction of Lilies up to the end of the sixteenth century, as Shakespeare uses the whiteness of Lilies as an apt simile. This Lily seems to almost prefer cottage gardens to the gardens of the great, for nowhere is it to be seen in greater beauty than in the former. Fortunately it will thrive on the heaviest soils, and the secret of success with it on such soils is to deeply dig the ground before planting, and to mix with it a good dressing of rotted manure, with some leaf mould and road sand. When planted in such a medium, and previously sprinkled with dry flowers of sulphur to keep the disease away, it must be left alone, when each bulb will become a clump in about five years. On an Essex clay soil I had one stem this year with eighteen flowers upon it, and several with fifteen or sixteen, and I was surprised at the Lily Show at Chiswick to see that the finest specimens of the white Lily there, had no more than a dozen blooms on a stem, and smaller blooms too. It should be planted in August, or September at the latest, if bloom are desired for the first season, care being taken to secure English grown bulbs, as the French ones are more liable to the fell disease, which is so much on the increase.

A Lily which is only less common than the white one, is the Orange Lily of cottage gardens, *Lilium croceum*. It may truly be said of this Lily that it will grow anywhere, though to get it in perfection—4 or 5 feet high, with a dozen, or even twenty, blooms on a stem—it should be put in a fairly damp place, where the ground has been deeply dug and heavily manured. It is perhaps the most gross feeder of all Lilies if it has the opportunity, thriving almost upon a subsoil of manure. It needs two to three years to attain its maximum growth, when it is a really fine sight. It is seldom seen, however, in its perfection, as it rarely has much trouble bestowed upon its cultivation, not being regarded as worth it. Another common

Lily, though not so universal as the preceding two, is the Tiger Lily (*Lilium tigrinum*), a very hardy and vigorous grower. If the soil is very heavy some road sand should be dug in, and some leaf mould, too, is a desirable addition. The site chosen should be a little sheltered from the midday sun, and fairly moist. Handsome though the common kinds are, both double and single, there are two varieties which are much more so—namely, *Lilium tigrinum* Fortunei, with orange-scarlet flowers spotted crimson, and a very woolly stem, 4 or 5 feet high, and *L. t. splendens*, growing 6 or 7 feet high, a fiery orange-scarlet with large, dark crimson spots. The bulbs of these two are cheap to buy. They are as hardy and vigorous as the type, but need a little more care and consideration to get them to perfection. They make a fine colour effect in the late summer and autumn. A variety of *L. t. Fortunei*, Fortune's Giant, produces forty or more

The Nectarine Peach.

THIS inadequate illustration of what is really a fine specimen of the Nectarine Peach represents one of the trees grown by Mr. D. Paxton, gardener to Hon. C. S. Irby at Hitchin Grange, Herts. Mr. Paxton considers the Nectarine Peach one of the best for outdoor culture, being of excellent flavour and colour in this garden. Late Admirable is another favourite Peach at Hitchin Grange. Last season five fruits weighed over 2 lbs., but these were smaller than usual, on account of the heavy crop left on. Victoria is the favourite Nectarine, and succeeds well. The Peach borders at Hitchin Grange are on a slope with a western aspect, and the height of the wall is 12 feet,



FAN-SHAPED NECTARINE PEACH TREE.

blooms on a stem, and is worth the generous treatment it demands to bring it to perfection.

To the above three easily grown Lilies may be added a fourth as hardy and as easy to grow as they—namely, the purple Martagon, with its long stately heads of reflexed flowers. The Martagon family are sometimes spoken of as "Turk's Caps," but the name is more properly applicable to the *Lilium chalcedonicum*. There are two beautiful varieties of it, *Lilium Martagon album*, and *L. M. dalmaticum*, the latter dark maroon, shaded black, and both are great improvements upon the type, album being especially beautiful. These Lilies will produce as many as forty blooms on a stem when well treated, and they increase rapidly. All three will thrive in any good moist soil in partial shade, the leaves sometimes becoming scorched in the sun, thereby impairing the vigour of the blossom. If the soil is deeply dug and well mixed with leaf mould, the white Martagon, which is more delicate than the others, will thrive just as well without any manure. The bulbs of the purple Martagon are cheap, but the white and dalmaticum cost two or three shillings each.—A. PETTS.

(To be concluded.)

with a border 5 feet wide. Loam from an old pasture was used when the trees were planted. The depth of the soil here is about 2½ feet, with a gravelly bottom and chalk beneath it, so no drainage is needed when planting trees. On the other hand, a considerable amount of watering has to be done during the summer; but with a good supply of water near, and plenty of liquid manure from the cow-sheds, the trees are always well supplied in this respect. Mr. Paxton maintains that most of his success is from a free use of the latter, which he uses from the stoning period till the end of October. When watering, a circle is made round each tree about 3 feet from the stem, and the trees are kept well syringed in the afternoon. They have now covered the wall, and are pruned on the spur system as much as possible. No protection whatever is used when the trees are in bloom, and Mr. Paxton has never known what it is to have a failure on his trees during the time they have been fruiting. Last year they were excellent, as the illustration shows. Crimson Galande, Early Louise, Goshawk, Grosse Mignonne, and the Nectarine Peach are the varieties chiefly grown, with Lord Napier, Pineapple, and Victoria Nectarines.—JOHN BOTLEY.

NOTES

NOTICES

Crystal Palace Fruit Show.—The Royal Horticultural Society's eighth annual show of British grown fruit will be held at the Crystal Palace on October 10th, 11th, and 12th. The prize schedule is now ready, and contains, in addition to the list of prizes, an authoritative list of dessert and cooking Apples, Pears, and Plums. Copies can be obtained on application to the Secretary, Royal Horticultural Society, 117, Victoria Street, Westminster. Applicants should enclose a stamp.

Royal Horticultural Society.—At a general meeting of the Royal Horticultural Society, held on Tuesday, July 30th, forty-one new Fellows were elected (making 638 since the beginning of the present year), amongst them being Lady Cranworth, Lady Pollock, the Hon. Mrs. Gretton, the Right Hon. R. W. Hanbury, M.P., the Hon. N. Charles Rothechild, and Clement Godson, Esq., M.D. * * The next Fruit and Flower Show of the Royal Horticultural Society will be held on Tuesday, August 13th, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 P.M. A lecture on "Tender Plants for Outdoor Gardening" will be given by Mr. Wm. Townsend at three o'clock. * * The Examination Syllabus has been revised recently by the Council acting on the advice of the examiners. Intending students should send a penny stamp for a copy of it.

The Season's Fresh Fruit.—The large arrival of fresh fruit sold last week in Covent Garden Market created a great stir, as thousands of packages of Pears and Plums were disposed of, and all the leading firms in the trade bought up the fruit readily. The Pears were not over-large, but they were clear-skinned and in prime condition, and quite ripe and fit for eating. These Californian fruits have never been marketed in such quantities at this time of the year before, and they bid fair to run French Pears and Plums very closely in the English markets. As they will be poured into our ports at the rate of ten, twenty, and thirty thousand packages at the time, it is clear that they will in future years revolutionise the early fresh fruit trade of the United Kingdom.

Cases of Theft and Damage.—At the Thingoe and Thedwastre Petty Sessions on Wednesday, July 24th, B. Fulcher, fifty-six years of age, foreman bricklayer, was charged with damaging seven Box shrubs (to the amount of 19s.), the property of Sir Henry J. C. Bunbury, Bart., at Great Barton. It was stated that the age of the trees would be from thirty to fifty years, and it was defendant's intention to use the wood for handles of tools. The magistrates regarded the offence as a serious one, especially as defendant was in a position of trust, and a fine of £2, with 19s. damage and 10s. costs, was imposed; in default, a month's hard labour. A week allowed for payment. * * At the Colchester Police Court on Tuesday of last week, a number of juveniles were brought forward to answer a charge of having stolen Strawberries, &c., in the garden of Mr. G. H. Maynard, fruiterer. They were fined.

Edinburgh Spring Show.—At the outset we advise all who are interested in gardening in the north to secure the advance schedule for the spring show of the Royal Caledonian Horticultural Society. The date of the show has been altered to one month later—namely, to May 7th and 8th instead of the same dates in April, as heretofore. The name and address of the secretary is Mr. P. Murray Thompson, 5, York Place, Edinburgh. In this advance schedule we find, on pages 7 and 8, competitions for young gardeners, which, if not a novelty in every schedule, at least is so in this Edinburgh one. It ought to have the serious attention of every young Scottish gardener. We recall the good work inaugurated a few years ago by the Scottish Horticultural Association, whereby they paid for lectures by the best chemists, botanists, and physicists in Edinburgh, and any young gardener for miles around "Auld Reekie" was encouraged to attend, and afterwards to compete in the examination. The writer personally obtained very great assistance from these lectures, and many men, now scattered over continents far apart, are no doubt applying in their practices the learning gained in Edinburgh. We are highly pleased to learn of the venture by the "Caledonian."

Cherries have been selling in London streets at a penny a pound, and good ones they were to appearance.

Scilly Isles.—While everywhere else the Apple harvest of this year promises to be one of the most prolific on record, the fruit is a total failure on the Scilly Islands. It is anticipated there will not be enough for local consumption, to say nothing of exportation.

Correction.—Will you allow me to correct a slight error which I made in my last communication to you? My friend the Rev. H. B. Biron says that it was not Mrs. B. R. Cant to which he alluded as bearing some likeness to a sport obtained by my neighbour Mr. Foster, but another Rose, of which we shall hear more by-and-by.—D., Deal.

Jennie Gordon Sweet Pea.—Kindly permit me to correct a slight error in your excellent report of the National Sweet Pea Exhibition. You state that there was only one new variety certificated, Countess Spencer, but in addition to this superb variety, a F.C.C. was awarded to Mr. Eokford for a giant flowered 'bicolor named Jennie Gordon. In this case form and size were simply perfect from the florist's standpoint, and the award was unanimous.—S. B. D.

The King as an Exhibitor.—The King, on Wednesday, was an exhibitor at the annual cottagers' show in connection with the Old Windsor Horticultural Society, which was held in the grounds of The Grange, near Windsor, the residence of Lady Anne Murray. His Majesty sent a magnificent collection of flowers from the Frogmore gardens "not for competition." Among other honorary exhibits was that of Baron Schröder.

The Perthshire Fruit Harvest.—Too good a harvest is the complaint of the fruit growers in Perthshire. Fully 200 tons of berries were despatched from the Blairgowrie district last week, and prices for Strawberries are down to £7 and £8 per ton. On two of the largest farms the fruit is to be left to rot, as the price offered will not pay the picking. Raspberries are also a big crop, but the price remains at £22 per ton. At this time last year Strawberries were selling at £23 to £27 per ton.

Fruit Curing.—The Apricot crop is fair, and of good quality generally. A better dried article is produced, for the reason that the fruit is allowed to get more uniformly ripe, and it is not so much over-sulphured, but there is room for improvement in the curing of Peaches. The Chinese pack injures the business every year almost beyond redemption, there not being sufficient discrimination between it and a better class of goods. Dried Peaches should be more largely consumed; a peeled article would become more popular if a little cheaper, and if it were known better. The ordinary article might be improved by more attention being given to brushing the fuzz off. In curing, the trays should be stacked after the first few days, according to locality, and the fruit allowed to finish in the shade.

Dangerous Hemlock.—A most distressing case of poisoning occurred at Millport on Sunday evening, the sufferers being a number of the boys belonging to Slatefield Industrial School, at present encamped at Towmont. During their afternoon march the boys rested by the roadside, in proximity to a quantity of growing Hemlock. Mistaking the Hemlock for an edible plant, a number of the lads ate some of it. Almost immediately over twenty of the boys were seized with violent pains, and the majority of them had to be carried back to camp. The superintendent administered an emetic, and sent for medical assistance. A lad of nine years, named John Callaghan, however, never regained consciousness, and died that night.

National Amateur Gardeners', Liverpool Branch.—There were many attractions in the district on the day chosen (July 25th) for the annual outing, when members and friends to the number of twenty-five journeyed to Chester and Eaton Hall. The weather was most discouraging, but the party made the best of it, and a very good half-day's outing was the result. The president, Mr. Muir, and Mrs. Muir; the treasurer, Mr. Robins, and Mrs. Robins; the exhibition secretaries, Miss Hunter and Mr. Arthur Dodd, were of the party who left the Liverpool landing stage at 12.30, reaching Chester at two o'clock. A sail up the Dee, and Eccleston Ferry was reached at four o'clock. Going through the beautiful park, they were then kindly allowed to inspect the corridor, Nymphæa house, &c., which gave immense pleasure by their perfect condition. A most enjoyable repast was served at the Iron Bridge, Liverpool being reached at nine o'clock.

Grapes for Export.—The Department of Agriculture at Ottawa is making arrangements to push forward the experimental export of Grapes from the Niagara district this autumn. About 100,000 lbs. of Rogers' black and red varieties will be forwarded.

Appointments.—Mr. William Dryden, late foreman at Nostell Priory Gardens, has been appointed head gardener at Halstead Place, Sevenoaks, Kent, and has already entered upon his duties. * * Mr. W. J. Grace, for the past twelve years head gardener at Bickton, Fordingbridge, Hants, as head gardener to Mrs. G. Morrison, Hampworth Lodge, Downton, Salisbury, Wilts.

Sparing the Trees.—The Improvements Committee of the London County Council report that they have had a further conference with Viscount Esher, Secretary to the Office of Works, in regard to the Piccadilly widening. "We have now the satisfaction of reporting," they say, "that arrangements have been made by which it is believed that it will be possible to retain as many as eleven of the existing trees near Park Lane, and one near Walsingham House; while several of the existing young trees will be transplanted into the tree pits in the new footway."

Boulevards for London.—Sir John Wolfe Barry, the eminent architect, who is initiating a scheme for the improvement of the appearance of the main thoroughfares of London, has succeeded in persuading his colleagues on the Westminster City Council to authorise the Works Committee to consider during the recess the practicability of planting trees on both sides of Whitehall and Parliament Street from Horse Guards Avenue to Bridge Street. Should this be successful the north side of the improved Strand will receive similar treatment.

Cannell's Championship Belt for the best fruit, flowers, and vegetables, the latter grown from Cannell's own home-grown seeds, and exhibited by the various gardening societies in Kent, was sharply contested for at the Eynsford Show, held last Bank Holiday. All the productions were of the greatest excellence, and, although the Eynsford Society was awarded first prize, Chislehurst second, and St. Mary Cray and Orpington third, the difference between them was trifling. The judges pronounced the exhibits the best that this now popular county prize has ever brought forth, and the keen rivalry caused a great deal of excitement during the day.

"A New Growth."—Naturalists will be grieved to hear of a new growth called the "Odium botanicum." This is the name given by a departmental committee, consisting of eminent men of science, to the rivalry which has long existed between Kew Gardens and the British Museum in the field of botanical research. The committee propose to eradicate the evil plant by transferring the herbarium now in the British Museum to Kew—a recommendation from which one of their number, Lord Avebury, vigorously dissents, on the ground, as he says, that the proposed removal would destroy the unique character of the greatest museum in the world by depriving it of an integral part of its natural history equipment. The botanical collection of the British Museum had its beginnings in 1753, in a bequest by Sir Hans Sloane, while that at Kew dates from about the same period, and owes its origin to a hobby of the then Dowager Princess of Wales.

A Thames Embankment Garden.—The men attached to the fire-boat "Alpha," moored off Blackfriars Bridge, have displayed both ingenuity and patience in constructing a garden—not run in opposition to the Embankment Gardens, but one they may call their very own. The outlook from the staging—water on one side, and a stone wall topped by trees on the other—becoming monotonous, they conceived the idea of forming a garden which is unique. The staging to which the "Alpha" is moored is connected by a gangway to a stone buttress at the foot of Blackfriars Bridge, the said buttress being paved with flagstones. As flowers will not grow on flagstones, they got over the difficulty by making a border about a foot deep, and utilised the mould displaced by fixing the electric light standards on the Embankment for filling it up. Commander Wells gave them a number of bedding plants, and the men have themselves purchased all the materials in the shape of cement, &c., and devoted their spare time to the construction and laying out. The beds are now gorgeous with Pelargoniums, Petunias, Pinks, Calceolarias, Marguerites, and other bright flowering plants. Between the two beds they have built a tank, which contains goldfish; one of their number is making a model of the Eddystone Lighthouse for the side of the tank, and to make it more realistic he suggests having it lighted by electricity. The whole reflects great credit on the men.

Roses at the Pan-American Exhibition.—At the Pan-American Exhibition is the finest display of Roses ever seen in the United States. Twenty thousand bluish Roses are now in full bloom. In walking through this Rose garden one is reminded of the famous valley of Cashmere, where for centuries the attar of Roses has been made. It is possible this industry may yet be introduced on a large scale into the United States.

"Floral-aid" for Flower Decorations.—The "floral-aid" is a simple device for the easy and expeditious arrangement of cut flowers, foliage, grasses, and similar material. The figures on pages 134 and 135 clearly explain the patent, which we feel confident in recommending. Mr. C. J. Wakefield, 58, Hindon Street, London, S.W., is the patentee, and has frequently exhibited his arrangement at Drill Hall meetings. These "floral-aids," as they are called, are made of stout dark coloured wire, variously looped, each being fixed into a heavy iron basal stand. The heavier the floral decorations are likely to be the more weighty is the base, so that there need be no fear of a collapse. They are very moderate in price.

Profits in Bananas.—The average number of Bananas on each bunch is from eight to nine dozen. The conveyance of the fruit between the island of Jamaica and Bristol is from 2s. to 4s. per bunch. The carriage between Bristol and Manchester is about 1s. per bunch. Allowing that the cost of the fruit and placing it on the boat ready for shipment is only 1s. per bunch, you have an initial cost to the exporter by the time it is delivered to the wholesale salesman, of at least 5s. per bunch. If the exporter only expects 6d. per bunch profit after taking all the risks, and the wholesale dealer another 6d., this brings the cost of the fruit to the shopkeeper to 6s. per bunch, or 8d. or 9d. per dozen. Therefore, to make a workable profit he will have to sell at 1d. each.

Opening of Victoria Park, Birkenhead.—This park, which is largely to be used as a recreation ground, was opened on Thursday last by the Mayor of Birkenhead, Alderman Cook, with whom were the Mayoress, Councillor Goodwin, and many other distinguished residents. Situated in one of the best positions, and covering an extent of 15 acres, it must prove of incalculable benefit to the largely increasing population of this great shipbuilding centre. The main entrance faces Bebington Road, and as the Mayor opened this, he said that the ceremony would remain one of the most pleasant in his year of office. Councillor Goodwin, the popular chairman of the Parks Committee, next opened the entrance from Albany Road, and discoursed upon the utility of parks. The purchase by the Corporation has cost over £4000, whilst £2000 has been spent on its improvement.

Sussex Weather.—The total rainfall for July at Abbot's Leigh, Haywards Heath, was 1.81 inch, being 0.90 inch below the average. The heaviest fall was 0.42 inch on the 29th. Rain fell on ten days. The maximum temperature was 89° on the 19th, the minimum 46° on the 8th and 9th. Mean maximum, 78.13°; mean minimum, 52.17°; mean temperature, 65.15°, which is 2.08° above the average. July has been a hot dry month, the shade temperature on sixteen days rising to 80° or above it. After the 24th there was thunder with slight showers. On the 28th and 29th there were heavy thunderstorms, and rain to the amount of three-quarters of an inch, which has done much good.—R. I.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
July and August.		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
Sunday .. 28	S. W.	deg. 64.9	deg. 58.8	deg. 71.3	deg. 50.6	Ina 0.03	deg. 62.9	deg. 62.6	deg. 60.0	deg. 47.7
Monday .. 29	E. S. E.	65.4	61.7	77.0	50.2	0.02	63.2	62.7	59.9	47.0
Tuesday 30	E. S. E.	69.7	63.6	82.0	52.5	—	64.5	62.7	59.9	47.9
Wed'sday 31	E. N. E.	71.7	65.0	78.5	58.8	—	67.5	63.5	59.9	54.0
Thursday 1	N. N. E.	66.1	61.6	75.0	58.5	—	67.8	64.2	59.9	55.5
Friday .. 2	N. N. W.	69.2	62.8	75.0	56.2	—	67.5	64.4	60.1	48.9
Saturday 3	S. E.	64.5	58.0	74.0	55.0	—	66.9	64.5	60.2	48.2
MEANS ..		67.4	61.6	76.1	54.5	Total 0.05	65.8	63.5	60.0	49.9

The first part of the week was rather unsettled; the latter part has been more settled and somewhat cooler.



Cheshunt Revisited.

IT is some twenty-four years since, under favour of the reigning Jupiter, I was permitted to record in "Our Journal" my impressions of Cheshunt. A day or two ago I visited it again. Not much was the same, except the hearty welcome and graceful hospitalities. Then Hybrid Perpetuals reigned supreme, now it is Hybrid Teas; then exhibition, now garden Roses. The good old original guinea Maréchal Niel still survives which I was then shown as a flourishing plant. Now it is a blackened skeleton, though still carefully cherished in a corner of the home garden. Then Cheshunt Hybrid had just begun the H.T.'s, and the Dijon class was not; now how merry both are, and how excellent! Then John Bright was in high favour (very much, I think, through his name); Duchess of Vallambrosa was the coming perfect white, and the too-much-forgotten Duke of Teck, then next forthcoming Cheshunt Seedling. Now there are four or five striking varieties, grandly independent of any exhibition duties, except as they take their places in the "ever victorious" Cheshunt garden classes. Also, a new mind now presides over the seedlings. "An Amurath to an Amurath still succeeds," a new Mr. George Paul has won his spurs as a skilful and successful hybridiser.

It was a little late for bloom, but I found plants more than rejoicing in the week's 4 inch rainfall. The Rose hedges were gigantic, and had been flowery cascades of the brightest colours. The modern Crimson Rambler still showed its solid cluster, whilst the shoots made by Carmine Pillar (if that was but longer lasting!) seemed inebriated by the exuberance of rainfall after the long dryness. We hardly looked at the H.P.'s, though there is one new very excellent one which, as Herodotus says, I prefer not to name, but which certainly merits a place in every garden; then there is also J. B. Camm (the only instance, I imagine, of a parson naming two Roses (H.P. and H.B.). Amongst Teas, the two Maman Cochet, which have this year been so wonderful, must be mentioned, but now it is the Rugosas and the climbing Roses here which challenge chief admiration. I saw three Rugosas of great excellence, Blanche Double de Coubert, pure white, and almost solid enough for exhibition; Mr. George Paul, jun.; atro-purpurea, quite the best colour yet, a brighter crimson breaking away from the old type of dull purple, and then Purple East, not much to boast of in the way of colour, but having passed into the Perpetuals, new flower shoots were already rapidly pushing out on it from where it had just ceased its summer flowering.

The Wichurianas are also a new departure; they were in wonderful foliage. I imagine any one of them would undertake to make the ugliest bank "beautiful for ever," if only allowed to follow its own sweet will. Amongst novelties Gruss an Teplitz, a very brilliant clustering red, seemed a garden Rose of promise; and so also the Dijon Tea Billiard et Barre—what a relief it is to turn to Newtownard names for pronunciation. There were beds and beds of Lady Battersea, also very attractive; whilst Liberty seemed an A. K. Williams in miniature. Perhaps the most interesting of all was Soleil d'Or, as it would seem a yellow Perpetual reached at last. It is a cross between Persian Yellow and Antoine Ducher of good substance, and a really indescribable colour. I am induced to quote the description, "gold and orange yellow, varying to reddish gold shaded with nasturtium red." We regained the house just before another tropical downpour, my lady companion happily laden to an extent under any other circumstances insupportable—ALAN CHEALES.

Stocks for Roses.

DESPITE the many drawbacks experienced this season in the way of drought, Rose stocks are, on the whole, in good condition. Seedling Brier and Manetti being the two stocks universally grown for budding by both the amateur and professional rosarian, I will confine myself to a few remarks regarding them in passing.

The Dog Rose can be used in both the cutting and seedling form, and for general purposes it is without doubt the best stock for all Roses; especially so is it in the case of Tea, H.T., and Noisette China, and most climbers. True, the Manetti is a good stock for the H.P. class, and many nurserymen use it exclusively, probably owing to the fine growth to be had of it from the bud, and also for the sake of the maiden bloom for exhibition purposes. This, however, I have often noticed of the Manetti, that when the Rose is lifted out of the nursery line and transplanted in its permanent quarters, the real Rose seems to fail to absorb the vigour of the stock, and the result is a coppice of Manetti shoots, which, unless carefully removed, soon ruin the plant.

Its great tendency to throw suckers is, I think, sufficient reason to have it discarded as a stock.

Rose de la Grifferaie is another stock which I have used, but my experience of it was not satisfactory; indeed I have found that the percentage of takes on it was decidedly less than in the case of the two already mentioned. Various methods can be adopted in the way of planting to insure of having the bark in good condition for lifting at any time when buds of the desired varieties are obtainable. Where only a few are grown, as in the case of the private gardener, that of planting in slightly elevated lines or ridges is a very good one, as it allows of the soil being removed without much disturbing of the roots, and it is at the same time easy to perform the operation.

In nurseries, where many thousands are required and expense is a consideration, it is usual to plant in the ordinary method, and with a draw hoe or spade at the time of budding, remove sufficient soil to get the bud inserted as near the root as possible, and where the bark is moist and runs easily. Should the season promise to be a dry one, an excellent plan is to draw up some soil in much the same way as earthing up Potatoes; by this means sufficient moisture is insured to keep the bark free. Seedling Brier, which early in the season looked anything but well, I have had treated in this manner, and they are at the present time as good as could be desired.

The operation of budding may be performed any time from the middle of June till the end of August, provided the buds to be inserted are fully ripe. The present is, however, about the best time, as a plentiful supply of ripened shoots are obtainable. Dormant buds taken from shoots that have just done flowering give successful results. Discard any from near the point of the shoot if they seem unripe. Having cut a bud from the shoot, upholding between the forefinger and the thumb of the left hand, remove with the point of the knife the woody part, being careful that the heart of the bud is not torn out at the same time. Now make a T shaped cut as near the root of the stock as possible, and with the ivory end of the knife gently raise the bark, pressing more against the inner bark so as to disturb cambium layer as little as possible. By taking hold of the end of petiole the bud can be easily slipped into its place. All that now requires to be done is to bind up with raffia or worsted, and this part of the operation is one that should be carefully attended, or otherwise the whole may result in a failure.

In about three weeks the ligatures will require looking over, and those which have become too tight, loosened and retied. As the season advances the stocks may grow so strong as to shade the buds, that in very wet weather there is danger of their going off, and to obviate this a timely dressing of the foliage and branches is necessary.—W. L., Edinburgh.

Austrian Brier Roses.

These appear to us especially attractive in a garden when budded on standard stems, as they quickly form huge bushes when treated properly, that is, pruned but sparingly. There are four varieties known and in general cultivation—the copper Austrian and the yellow Austrian, dating from 1596 in their introduction; Harrisoni and Persian Yellow, both semi-double, and have blossoms of rich yellow shades, are of more recent origin. Given a position in the garden where they have ample room to grow, they require but little attention beyond training, and in the early season bloom so abundantly that they form a rich display.—H. S.

Camellia Sasanqua.

AT first sight the illustration of this single-flowering Camellia recalls to mind Fremontia californica, though the petals are just a trifle too fragile in appearance. Thunberg was the first to describe the species, and this was about the end of the eighteenth century. It occurs wild in Kinsin, the southern island of the Japanese group, but further north it is cultivated. The wild plant is an upright shrub from 5 feet to 10 feet high, and is in flower from December to February. If we remember rightly there is a specimen in the Himalayan house at Kew. Messrs. J. Veitch & Sons were the introducers of the plant to this country, it having been sent by Mr. Maries, one of their eastern collectors, about the year 1879 or 1880. They have found Camellia Sasanqua much hardier in their Coombe Wood nursery than other members of the genus, and it can be relied on to set its buds more freely. It may be considered by those who have planting to do this year, and though it is not tender, yet it would be erring on the safe side to plant it against a sheltered wall. A cool house, of course, suits it splendidly. The colour of the flowers is bright rosy pink with a prominent brush of yellow stamens. A double white form, a variety from it, has also been shown. In 1892 the Royal Horticultural Society awarded a first-class certificate to it.



CAMELLIA SASANQUA.

Scented Flowers and Leaves.

LUCULIA GRATISSIMA has delightfully scented pale mauve flowers, borne in trusses during the sombre days of winter. It is rarely seen, as it is not amenable to pot culture; but planted out in a well drained border in a warm conservatory it does well. After flowering shorten back all shoots to within an inch or two from whence they sprung, and keep the plants rather dry at the roots until new growth commences. There is a fine specimen of this plant at Firbeck Hall, Rotherham, Yorks, and one at Patshull, Staffordshire.

Trachylopernum (*Rhynchospermum*) *jasminoides* flowers during summer, when its dark green glossy leaves are almost hidden with snowy white, sweet scented flowers. It does well either in pots or planted out in a cool greenhouse or conservatory in a partially shaded position. There is a fine specimen of this plant in the conservatory at Temple Newsam, Yorks, also one at Edenhall, Cumberland.

Brugmansia (*Datura*) *suaveolens* is delicately scented, as is the semi-double form *Knighti*. They are both fine plants for rooms when grown as standards in large pots; their pendent, fragile trumpets of white are most attractive. As they are gross feeders they require a substantial loamy compost, and when the pots are full of roots frequent applications of liquid manure, soot water, or artificial manure. They are as easily struck as most softwooded plants, and when in the propagating house may be frequently sprinkled overhead to prevent flagging until roots are formed. In winter they should be kept dry and stored away like *Fuchsias*, and again started in spring in a moist atmosphere, as in a vinery at work, but previous to this, shorten back to an eye or two from the base of the past year's growth. When new growth has been made, shake most of the old soil from the roots and repot.

The popular *Heliotropium* may be flowered at any season of the year by preparing batches of plants, and where it is planted cut against the back wall of a sunny greenhouse it will produce quantities of flowers for cutting, although as a cut flower it is rather disappointing, only lasting a day in perfection. It is easily raised from cuttings of the young shoots. Loam, leaf mould, and sand, with a little old manure, will grow it well if its other wants are attended to, as watering and full exposure to light. When growing for winter flowering stand outdoors on an ash bottom during summer, keeping all blooms picked off until the end of September, when the plants should be placed in a light house close to the glass, where a night temperature of 50° to 55° can be maintained. As a standard, well grown, it is very effective in the flower garden, and I well remember seeing it in quantity as dot plants on the lawn between flower beds some years ago at Llangedwyn, North Wales.

Boronia megastigma is a most desirable plant, with rather dull brown, inconspicuous flowers, but with a strong aromatic perfume. One plant is sufficient for a large room. It requires most careful watering, extremes in either direction are resented. Being a fine-rooted subject fibry peat and silver sand is the compost to grow it in; very firm potting, and a cool, airy house in summer. Be careful that the rays of the sun do not strike the pots, or the fine roots will perish. Keep under glass throughout the year, and use as little fire heat as possible. Another plant rarely seen in a thriving condition is *Daphne indica*, and yet its wants are simple; but, like the *Camellia*, if it once gets into a bad state it is rarely brought round. The finest plants on record have been raised from cuttings—namely, those at Berkeley Castle, Gloucestershire, whereas nurserymen usually graft it upon the seedlings of *Daphne Mezereon*, and this may have something to do with the fickleness of *Daphne indica*. A good loamy compost suits it better than peat, and it is rather impatient of much cutting with the knife. When alluding to sweet-scented flowers, Violets, Roses, Carnations, Sweet Peas, Mignonette, Tuberoses, and many bulbous plants require a reference, but the prominent place they hold in the estimation of all flower lovers precludes me at present entering on their culture, seeing also that they are frequently and ably dealt with by other writers and growers in the Journal.

Sweet-Scented Leaves.

And now to consider plants with sweet-scented leaves. Scented-leaved *Pelargoniums* must have a place, as their popularity, either as plants for sitting rooms, or to cut for intermixing with other flowers. This may appear an anomaly, as I have before protested against foreign foliage, but the peculiar properties of fragrant leaves take away the objection. There are a considerable number of varieties, amongst which *Lady Scarborough*, *Fair Ellen*, *filicifolia*, *citriodora* and *tomentosum*, and the white variegated *Lady Plymouth* may be mentioned. Where they are required for cutting I think they are best planted in a narrow border and trained against a back wall of a sunny greenhouse, feeding them occasionally. When grown as pot plants, pot firmly in loam, leaf mould, and sand, giving stimulants when the pots are full of roots. When in constant demand as room plants a good stock is needed, as they soon become shabby in the dry atmosphere or badly lighted positions they have to occupy. They are easily struck from cuttings, selecting good shoots 6 inches or so in length. I prefer to allow them to dry for a day or two before insertion, as I find they are less liable to damp. If struck in autumn or spring place on shelves in a warm house with a temperature of 60°, removing to a lower temperature when

struck. [We would be delighted to see better and larger collections in gardens everywhere; the scented *Pelargoniums* are gems in every respect.—ED.]

Lippia (*Aloysia*) *citriodora* is available during summer and autumn. It is easily increased by cuttings of the young shoots in spring; an old plant put into a moist warm house will produce a good many such cuttings. The cuttings after insertion should be placed in the propagating house, plunging the pots in cocoa-nut fibre, leaves, or sawdust, sprinkling the cuttings twice daily, so as to prevent flagging; after rooted potting into small pots, pinching occasionally to form symmetrical plants, which in the second year may be cut from as needed. The Lemon-scented *Verbena* is often dried off during winter, being deciduous; but this is undoubtedly a mistake. It should be watered as required, not allowing the soil to become parched, and wintering in any frost-proof place. In the south of England with a little winter protection it stands outdoors. There was a circular bed of this plant at Temple House, Great Marlow, Bucks, which was thatched with straw during winter. *Eucalyptus citriodora* and *E. globulus* are easily raised from seed sown in warmth in early spring, make nice plants for room decoration in winter in 5 or 6-inch pots. They must be grown in a light position in a cool airy house in summer, and an intermediate house to retain the glaucous hue of *globulus* in winter. *Diosma ericoides*, a plant rarely seen, but most useful to mix with cut flowers for its fragrance and its light and graceful effect. I remember well some large bushes of it grown in large pots in a Yorkshire garden that were freely cut during the autumn and winter. Its treatment is almost identical with what an Indian *Azalea* requires—a peaty soil, with silver sand to keep it porous, a free supply of water during summer, and to be placed in the open air; but where they are protected from the fierce rays of the sun, being a fine-rooted plant, syringe regularly, and in the autumn remove to a cool light airy house.

Myrtles, both broad and narrow-leaved, are plants whose culture is of the simplest. A loamy compost, a cool house, close attention to watering, and to be well syringed to keep down thrip. When grown in tubs they are useful in conjunction with Sweet Bays and *Lanrustinns* for standing on terraces, balconies, verandahs, or under porticoes, as their sombre aspect and pungent odours lend themselves to architectural dignity with appropriateness. Reference must be made to the hardy *Chimonanthus fragrans* (Winter Sweet), flowering as it does in the dreary, dark midwinter days when the garden is desolate. Its flowers are dull in colour but exquisite in perfume, but most useful to cut for glasses. After flowering, when grown against a wall, spur in all shoots that have flowered to within two or three eyes from their base, as flowers are produced from the ripened shoots. *Jasminum grandiflorum* flowers in the early autumn trained against a wall and allowed to ramble freely in an unrestrained informal way, pruning being confined to the removal of old wood and thinning out where crowded in the early spring, as the resulting lateral sprays are the flowering shoots.—F. STREET.

Gunnersbury House.

It is doubtful whether Europe and the Western World generally had any deep-seated respect for Japan and the Japanese prior to the war of 1894, when the island inhabitants completely defeated the equivocating Celestials. We have for long found amusement in the practices, even the ordinary operations, of the Jap; everything he does is done exactly opposite to our method; he even shakes his own hands instead of those of his friends when parties meet in the street. Yet, withal, the Japs are clever and active minded; they have imbibed the acute business predilections of the West (for wisdom sometimes goes East), and perhaps in no sphere of occupation more than that of horticulture has his energetic presence become prominent. His land has furnished a host of the handsomest and most beautiful trees, shrubs, and flowers that British gardens contain, and he trades upon the English love for these magnificent gifts of Nature's. And so it comes that we now find collections of Japanese plants and shrubs being arranged and planted as features of some of our home gardens here; and when such collections are choice, the designing and planting being accomplished with care and skill, a Japanese garden, indeed, furnishes an exceedingly interesting addition to the ornamental grounds.

At Gunnersbury House, a residence of Leopold de Rothschild, Esq., Mr. James Hudson has, since last October, completed one of the most strictly true and magnificent gardens of Japanese design and composition to be found anywhere in the kingdom. The ground, before any alterations had been made, was such as one could point to in almost any garden. It lies sheltered, and falls from the northward, being somewhat broadly basin shaped, in extent under an acre, and flanked at the southward extremity by an Ivy-clad wall, and the green encrusted ruins of a castellated building. It was necessary to lift and re-arrange the majority of the afore-existing shrubs, and to lop a number of large trees to secure light, air, and space. A rugged wall, built with old bricks, with an uneven, dishevelled top, and recesses and buttresses upon the face of it, had to be built at what I term the north line of demarcation. More will presently be noted in reference to this wall (which is now a chief feature of ornament), but in the meantime I simply point out that it was erected and matches the crumbling,

ruiniform condition of the building mentioned as being on the south side. The latter can be seen through the trees.

Having divided the area of the glass houses from the sphere of the intended Japanese garden, the next thing was to predicate the contour of the scene, raising and lowering the surface lines and, later on, mapping out the paths. There happens to be an irregular depression a little to the west side of the chosen ground, and here Mr. Hudson decided to form a series of basins for the choicer Water Lilies and other aquatics. The outline of the water's margin is very sinuous, reaching out in three or four directions into rounded loops. So much as possible each loop is judiciously screened from the main central basin, and by this slight reservation an interest is the more attracted as the visitor advances over the stepping stones. You see here again the ideal is strictly Japanese, for in this new garden there are no gravel walks; but great, irregular, yellowish sandstones, placed some inches apart, form a firm, clean, and level footway. These add greatly to the character and effect of the general feature.

The Water Lily basins when properly planned were then cemented, both edge and bottom. A water system had also to be laid on. There are two lines of piping from two sources. One conveys cold water from the large lake at the base of the terrace lawn in front of Gunnersbury House; the pipe in this case is of cast iron, having a 3-inch bore. The other pipe proceeds from a warm tank devoted to the blue Nymphaeas, and conducts a stream of warm water right down to two of the basins, which in summer contain the choicer and more tender Nymphaeas, including *N. stellata pulcherrima*. I should have observed that the pools are at different levels, and are individualised—that is, separated each from the other by divisional stone edges suitable to the purpose. The pipe which conveys the warm water is galvanised, 1 inch in diameter, covered around with felt, and is enclosed all its length in land drain pipes. Mr. Hudson finds that the water loses only 4° of its heat during the flow of fully 50 yards from the warm tank to the outdoor basin, where the water has a warmth of 68° to 70° Fahr.

It remains, now, to mention some of the plants and other subjects that have been planted. The yellow Lotus has a basin to itself, and also the Blue Water Lily, while the finest of Marliac's hybrids are showing vigour in the central portion. Also in the water, by its edge, are plantations of *Butomus umbellatus* (the Flowering Rush), *Zazania aquatica*, *Juncus zebrinus variegatus*, *Glyceria aquatica variegata*, very beautiful; *Sagittaria japonica* in flower, *Menyanthes trifoliata* (the Bogbean), &c. Around the margin are such *Funkias* as *ovata*, *albo-marginata*, *Sieboldiana*, and *variegata*, with varieties of *Mimulus* flowering freely beneath graceful shrubs. *Iris Monnieri* sends up its handsome blades, while groups of *Hemerocallis aurantiaca*, *Rodgersia podophylla*, *Aralia* (or *Fatsia*, as it is now called) *japonica*, and such *Hydrangeas* as *Hortensis*, *mandschuricus*, and *Mariesi*, with species of *Miscanthus*, are also present. Bamboos in great profusion are also near by the water, and bend over the stepping stones, and more still over the water. *Polygonum orientale* adds its deep purplish spikes to the scene. Then, again, there is that handsome plant *Saxifraga peltata*, 2½ feet tall. Lilliums in many kinds, including *Lilium giganteum*, the latter in a number of prominent positions, where it promises splendidly. *Gentiana acaulis* is meant to adorn the chinks between the edging stones, and groups of nicely coloured *Ophiopogon jaburan variegata* are also to be seen. The giant *Papyrus* is thriving amongst the Nymphaeas.

Further back in the recesses by the water are clumps of the common and variegated *Phormiums*, besides the species *P. atro-purpureum*. *Iris siberica* and *Osmunda regalis*, together with *O. r. cristata* and an *Aspidium*-like Fern, named *Struthiopteris japonica*, are graceful, and variously utilised. *Rohdea japonica* is rare in British gardens; it is handsome, resembling a finely variegated *Aspidistra lurida*. The Japanese people, I believe, prize this plant much as we used to value Tulips. *Rhaphis humilis*, being finer than *R. flabelliformis*, finds itself in a prominent position; both species, however, are present. *Cocos Yatai* is another ornamental Palm here utilised in the composition, while on six special prominences I found magnificent specimens of *Trachycarpus* (*Chamaerops*) *excelsus*.

Amongst *Arundinarias* worthy of a place in this collection were *A. anceps*, *Simoni*, *nitida*, and *castillonis*, and of *Phyllostachys* some fine examples, viz., of *P. nigra*, *aurea*, *flexuosa*, *Quiloi*, *viridiglaucens*, &c. All the finest of these Japanese Maples (*Acers*) are included, and some are indeed exceedingly lovely. Another fine shrubby plant, about 5 feet high, not found every day, is *Aralia pulchra*, with palmatifid, deep green glossy leaves. *Musa Cavendishiana* in place of *Musa japonica*, as can be imagined, formed a special feature on a rising mound at a distance from the Water Lilies, and in another clump were sturdy plants of *Lobelia Victoria* var. *gigantea*, and also interspersed were plants of *Arundo mauritanica* fol. *variegata*. The Grass Tree (*Xanthorrhæa hastilis*) is one of the few plants, not Japanese, that find a place; it is Australian, but is choice, and so it has been used. *Physalis Alkekengi* will furnish, with the *Kniphofias*, a grand show in autumn. *Styrax obassia* and *Ginkgo biloba*, together with some Japanese Oaks, *Diervillas*, *Pernettyas*, *Rosa rugosa*, and *R. r. Blanche de Coubert*, its semi-double white variety; also *Catalpa Kämpferi*, *Pinus Koraensis* (?) (a fine glaucous leaved species), and *Abies Sieboldiana* and *A. polita*, are all uncommon, and, besides their interest and value on that account, are very ornamental. *Taxodium Kämpferi* has been placed in suitable spots. The visitor here will

certainly be captivated by the imposing and beautiful *Dimorphanthus mandschuricus variegatus*. The leaves are enormous in size, and variegated with white and cream-colour. The parent species is also present and doing well. *Pittosporum Mayi*, with twisted leaves and upright compact habit, forced its attractions upon us, and groups of *Cornus Spathi anrea* were very showy. The Japanese Umbrella Pine (*Sciadopitys verticillata*), of which there are several well formed examples, is, of course, a subject not omitted.

Over one arm of the water scene a stout bamboo bridge has been constructed, and the blue *Wistaria* has begun to make its way along the handrail. The latter is bound with pliable cane, and is not nailed. The bridge is simple, and well adapted to the surrounding scene. In this matter considerable judgment is required, and elaborate constructions are not called for. Two Japanese lanterns hewn from granite, and standing over 6 feet in height, are objects of additional interest. They are massive and ornamentally carved. The lantern part is towards the top, but is surmounted by a tapering cone and overhanging fringe; there is a broad, jutting base, an expansive centre, joined above and below with straight columns. These objects are made so that they can be easily taken to pieces; they were imported from Japan. Before concluding this extended description of the Japanese garden, I wish to mention that between all the stepping-stones (and these are on all the paths) one finds such dwarf plants as *Euonymus radicans variegatus* (pegged down), *Balearia Sandwort* (*Arenaria balearica*), *Thymus serpyllum*, *Pratia littoralis*, &c.

The state of this new Japanese garden would lead one to conclude that it had been established for years. It certainly is an additional feather to Mr. Hudson's cap. A fence of about 3 feet high is being made all round this feature to exclude cats, dogs, and stray visitors. Gates are also being set across the entrance paths. Both the fence and the gates are made of the stout brown bamboo canes.

Ripening of Fruit.

THE most striking phenomenon now occurring in our gardens is the ripening of the fruit. Currants, Gooseberries, Apricots, early Apples and Pears, Cherries, Raspberries, and Strawberries, are now gratifying every sense with which we are blessed, for the very vendor's cry of them in our streets is musical. Varying as fruits do in form, colour, flavour, and odour, still they all have one common office—the maturing of the seed they contain. To effect this they require a due supply of sap as well as of the peculiar juice of the parent plant, for they make no further advance if the entire wood be cut through below them, so that they are only attached to the parent by a strip of bark; neither will they advance, though fully supplied with sap, if the peculiar juices are cut off from them by removing the leaves that are above them on the branch. Yet each fruit has a peculiar elaboration of its own to perform, for though the fluids afforded by the branches and leaves be nearly similar, yet each fruit differs from another in fragrance and flavour; six different varieties of the Peach and of the Apple, budded upon the same branch, still retain unaltered their times of ripening, and their distinctive colours and flavours. Now, the processes going on at different periods of a fruit's growth are very opposite in their character. During their green and growing state they are usually converting gummy matter into an acid; but during ripening they, as commonly, are converting an acid into sugar. To convert gum or mucilage into tartaric acid, as in the early growth of the Grape, oxygen in excess should be absorbed, for their relative components stand thus:—

				Gum.		Tartaric Acid.
Carbon...	...	...	...	42.23	...	24.05
Oxygen	...	...	...	50.84	...	69.32
Hydrogen	...	...	...	6.93	...	6.63

They might, therefore, be expected to absorb more oxygen than the leaves, and this is actually the case; for though a Vine branch will continue to vegetate in a glass globe hermetically sealed, yet the Grapes upon it will not increase in size unless oxygen gas be from time to time admitted. The same phenomenon occurs during the ripening of the Grapes; oxygen has to be absorbed during the conversion of the tartaric acid into sugar, but a larger volume of carbonic acid has to be evolved, and this is coincident with the result of well established experiments, uniformly testifying that carbonic acid is given out abundantly by ripening fruit. "Six equivalents of tartaric acid," says Liebig, "by absorbing six equivalents of oxygen from the air, form Grape sugar, separating at the time twelve equivalents of carbonic acid." This, however, is not the only decomposition taking place whereby sugar is formed into ripe fruit, but there is sufficient reason to believe that its mucilage and starchy constituents are converted into saccharine matter by the combined agency of warmth and the acids. It is thus that Apples are rendered so much sweeter by baking; and M. De Candolle states that the pulp of Apple dissolved in water with a vegetable acid is converted into sugar, and that gummy matter obtained from starch and mixed with tartaric acid, aided by warmth, effects a similar transmutation.

Societies.

Royal Horticultural—Scientific Committee, July 30th.

Present: Dr. M. T. Masters (in the chair); Messrs. Drury, R. M. Hogg, Saurdeis, and Bowles; Drs. Müller, Cooke, and Rendle; Prof. Hartog, Rev. W. Wilks, and Rev. G. Henslow, Hon. Sec. Visitor, M. Marc Micheli, President of the Horticultural Society, Geneva.

Helianthus, supposed hybrid.—Mr. Buffham sent a flower, of which he writes:—"I think it is a real hybrid; the seed-bearing parent was the annual variety fertilised with Harpalim, and possibly with *H. multiflorus* as well."

Not having blossoms of the parents for comparison, it was thought hazardous to express an opinion as to the true nature of the hybrid.

Pear mite.—Leaves of Pears attacked by this common parasite were received through Mr. Gant of the Yorkshire College, Leeds, from Mr. G. Brochie of The Gardens, Grimble Park, Saltburn. This insect is practically non-injurious to the trees unless in excessive quantity. M. Micheli observed that such was also the experience of fruit growers in Geneva.

Eggs in Apple stems.—Capt. Short, F.R.H.S. sent specimens, observing that "a pound of Apples were bought in Worthing about April. They were of Tasmanian origin, and on the stalk of each, as well as on the hollow portion of the Apple adjoining the stalk, were some reddish eggs." Mr. Saunders undertook to examine them.

Apricots splitting.—Mr. Worsdell observed that he had noticed that many Apricots had the flesh split open this season, but not the stones. Mr. Bowles remarked that he had experienced a similar occurrence in previous years, and attributed it to the extreme drought.

Cucumber proliiferous.—Dr. Masters exhibited flowers of both male and female Cucumbers in which the axes had thrown out other blossoms. He undertook to report upon the monstrosity.

It was, however, a remarkable fact that the three specimens came from Ireland, Dorsetshire, and Middlesex respectively within a few weeks of each other. No such occurrence has ever been known previously.

Wood Leopard Moth.—Young Ash trees were received from Mr. L. Lloyd, F.R.H.S., of Blandford Lodge, Chiswick, who observes that "the whole tree, the stem being a foot thick, and branches were all bored. The tree is about 30 feet high. Similar borings occur in both Lilac and Laburnum."

The Midland Carnation and Picotee, July 31st and Aug. 1st.

The tenth annual exhibition was held as usual in the Botanical Gardens, Edghaston, and without the slightest doubt proved to be the most successful, both as regards the numbers of entries, quality of exhibits, and the attendance of visitors since the inception of the society a decade ago. On both days the weather was all that could be desired, both from exhibitors' and visitors' point of view, and the receipts

on the first day more than equalled those of the two days last year—wet weather having prevailed on the last occasion—which must have proved sweet unction to the enterprising aspirations of the joint managers of the society, Messrs. R. Sydenham and R. Chatwin Cartwright. Considerable surprise was occasioned by the absence of Mr. Sydenham's exhibits, excepting a not for competition collection of cut Carnations and Picotees, set up in his newly invented Carnation exhibiting vase for the reception of triplet blooms; it is made solely of metal, and appeared to serve the purpose very well. Regarding especially the legitimate exhibits, the excellence of the major portion was so uniformly great that it would almost amount to invidiousness to particularise. The exigencies of space also will not allow notice of more

than three or four of the leading winners out of seven in each of the first twenty-two classes, and similarly of the following thirty classes, exclusive of miscellaneous exhibits. In the list of prize-winners it will be observed that Mr. R. Chatwin Cartwright "broadside swept the decks," and that other noted Carnationist, Mr. A. W. Jones, Stechford (formerly of Handsworth), again secured the trade growers' silver cup, which he annexes outright.

For twelve self Carnations, dissimilar, the first prize was awarded to Mr. R. C. Cartwright with a superb lot, consisting of Barras, Her Grace, Regina, Ibis, fine; Much the Miller, Benbow, Endymion, Seagull, Germania, Wild Swan, The Pard, and Mrs. Colby Sharpin. The second prize fell to Mr. A. R. Brown, Handsworth, with a very close complement of Dndley, Stuart, Wild Swan, Cecilia Blue King, Sultan, Mrs. Eric Hambro, Bishop Ilsley, Germania, Benbow, Lady Hindlip, Enchantress, and Britannia; third to Mr. Martin R. Smith, and fourth Mr. A. W. Jones.

For six selfs, dissimilar, Mr. A. Chatwin, Edgbaston, annexed first honours with remarkably good examples of Britannia, Bomba, Her Grace, Germania, and Boreas; second, Mr. W. D. Rotch, Liverpool, with Cecilia, Etna, Boreas, Roseleigh Gem, Emblem, and Mrs. A. J.

Palmer; third, the Rev. C. A. Gottwaltz, Droitwich; fourth, Mr. W. H. Parton, jnn., King's Heath; fifth, Mr. G. Charrington, Chislehurst. For six selfs, one variety only, Mr. Cartwright was again invincible with the good old Germania; second, Mr. D. Walker, Kilmarnock, with Germania; third, Mr. Tom Lord with Mrs. Eric Hambro and Mr. A. W. Jones fourth with Germania.

For twelve yellow ground Picotees, dissimilar, Mr. Cartwright was to the fore with Lady St. Oswald, Daniel Defoe, Duke of Alva, Mrs. Herbert, Mrs. Tremayne, Effie Deans, Onda, Lady Bristol, Lauzan, Alberta, Mohican, and Holeodorus. Second, Mr. M. R. Smith with Gronow, Franklyn, Countess of Verulam, Mr. Fanshawe, Lady St. Oswald, Miss Anna McKay, Francisca, Lauzan, Mrs. Durant, Lucy Glitten, Child Harold, and Borderer. Third, Mr. A. W. Jones, and fourth Mr. C. F. Thurstun, Wolverhampton. For six yellow ground Picotees, dissimilar, the first honours were adjudged Messrs. Pemberton and Son, Walsall, with Mohican, His Excellency, Mrs. Douglas, Mrs. Tremayne, Mrs. Nigel, and Mrs. Herbert. Second, Mr. A. Chatwin



"FLORAL-AID" EMPLOYED IN MASSIVE ARRANGEMENTS. (See page 129).



THE "FLORAL AID," WITHOUT FLOWERS. (See page 129).

with Mohican, Hesperia, Lauzan, Dervish, Mrs. Douglas, and Empress Eugénie. Third, Mr. E. Charrington, and fourth, Mr. W. H. Twist, Yardley. For six yellow grounds, one variety only, Mr. Martin Smith scored with a superb exhibit of Childe Harold; second, Mr. R. C. Cartwright with Lauzan; third, Mr. G. Lindop, Langport, with Lady St. Oswald; and fourth, Mr. A. W. Jones.

For twelve Fancy Carnations, dissimilar, Mr. Cartwright secured first honours with a beautiful and even lot of blooms, comprising Voltaire, Queen Bess, Monarch, The Gift, Renegade, Eldorado, Muleteer, Ossian, Hidalgo, Perseus, Stanley Leighton, and a sport from Monarch. Second, Mr. A. W. Jones with Voltaire, Broderick, Emperor, Queen Bess, The Gift, Monarch, Queen of Hearts, Eldorado, Golden Eagle, Aglia, Charles Martel, and Perseus. Third Mr. W. R. Smith, and fourth Mr. W. D. Rotch. Six Fancy Carnations, dissimilar, Mr. Albert Chatwin annexed the first prize with Voltaire, Queen Bess, Monarch, Perseus, Broderick, and Ampton. Second, Mr. Tom Lord with G. Cruickshank, Lady Ardilaun, Voltaire, Monarch, Eldorado, and Yellow Hammer. Third, Mr. Herbert Smith, the secretary; fourth, Mr. J. H. D. May, Malvern. For six Fancy Carnations, one variety only, Mr. Cartwright was the hero with Hidalgo, excellent; second, Mr. A. Chatwin with Voltaire; third, Mr. M. R. Smith with Hidalgo; fourth, Mr. A. W. Jones with Voltaire; and fifth, Mr. A. R. Brown with Hidalgo.

For twelve white ground Picotoes the first honour went to Mr. Cartwright, a grand contingent of Fortrose, Little Phil, Mrs. Payne, Grace Ward, Pride of Leyton, Mrs. Openshaw, Mrs. Beswick, Mrs. Gorton, Mrs. Barron, Favourite, Thos. William, and Ganymede. Second, Mr. C. F. Thurstan with Polly Brazil, Favourite, Amelia, Ganymede, Mrs. Beswick, Mrs. Payne, Brunette, Mrs. Sharpe, Lavinia, Fortrose, John Smith, and Thos. William. Third, Mr. A. R. Brown; and fourth Mr. T. Lord. For six white grounds the Rev. C. A. Gottwaltz was deservedly first with W. H. Johnson, raised by himself from a yellow ground, Pride of Leyton, Maggie, Mrs. Openshaw, Thos. William, and Morna. Second, Mr. D. Walker, with Amy Robsart, Mrs. Payne, Mrs. Beswick, Harry Kenyon, Lena, and Lady Louisa. Third, Mr. E. C. Rossiter, Langley Green; fourth, Mr. F. W. Goodfellow; and fifth, Mr. Herbert Smith.

For twelve flake or bizarre Carnations Mr. Tom Lord was invincible with George Marshall, Master Fred, Robert Houlgrave, Sportsman, J. S. Hedderley, Edith Annie, Admiral Curzon, Crista Galli, J. W. Bentley, Gordon Lewis, Mr. Tom Lord, and George. Second, Messrs. Thomson & Co., Birmingham, with Geo. Melville, Thalia, Gordon Lewis, John Buxton, J. S. Hedderley, W. Skirving, Crista Galli, Master Fred, Geo. Budd, Guardsman, Admiral Curzon, and S. S. Thomson. Third, Mr. Cartwright; fourth, Mr. C. F. Thurstan; fifth, Mr. A. R. Brown. For six flake or bizarre Mr. F. W. Goodfellow was first with Gordon Lewis, Sportsman, R. Houlgrave, J. S. Hedderley, Dr. Hogg, and Arline. Second, Mr. D. Walker with R. Houlgrave, Edward Rudd, Master Fred, Joe Edwards, and Admiral Curzon. Third, Mr. E. C. Rossiter; and fourth, Mr. C. F. Budenberg, Marple. For six Carnations or Picotees, dissimilar, Mr. Moore Binns, Worcester, secured the first prize with Czarina, The Gift, Monarch, Badminton, Hygeia, and Queen Bess. Second,

Mr. H. Boys, Walsall, with Czarina, May Queen, G. Cruickshanks, Mohican, Germania, and Cardinal Wolsey. Third, Mr. R. Hull, King's Heath; fourth, Mr. T. Newton, King's Heath.

The class for single blooms, Carnations, was capitally represented, and the competition very keen. For a scarlet bizarre, Mr. H. Boys was first with R. Houlgrave; second, Mr. D. Walker with Admiral Curzon; third, Messrs. Pemberton with R. Houlgrave; and fourth, Mr. F. W. Goodfellow with the same variety. For a crimson bizarre, the first and second prizes were awarded to Messrs. Pemberton with J. S. Hedderley; third, Mr. Tom Lord with Master Fred, and Messrs. Artindale with J. S. Hedderley. For a pink or purple bizarre, the first and third prizes fell to Mr. T. Lord with Sarah Payne and J. W. Bentley; second, E. C. Rossiter with W. Skirving; fourth, Mr. Cartwright with W. Skirving. For a scarlet flake, Mr. F. W. Goodfellow was first with Sportsman; second, Mr. E. C. Rossiter with Guardsman; third, Mr. E. Kenyon with Guardsman; and fourth, Mr. T. Lord with Sportsman. For a rose flake, Mr. T. Lord annexed the first and second prizes with Mrs. T. Lord and Mrs. May; third, Mr. C. F. Thurstan with Crista Galli; and fourth, Messrs. Thomson & Co. with Thalia. For a purple flake, Mr. C. F. Thurstan won with Gordon Lewis; second and third, Mr. Cartwright with Gordon Lewis; and fourth, Mr. F. W. Goodfellow with Gordon Lewis.

SINGLE BLOOMS; PICOTEES, AND FANCIES.—For a heavy red edge Mr. Tom Lord was placed first with Brunette; second, Messrs. Pemberton with John Smith; third, Mr. A. R. Brown with Maria; and fourth, Mr. C. F. Thurstan with Brunette. For a light red edge Mr. Cartwright won

with Thos. William and Messrs. Pemberton, Goodfellow, and Rossiter as in order named with the same variety. For a heavy purple edge Mr. Cartwright was first with Mrs. Openshaw; second and third, Mr. E. C. Rossiter with Muriel and Amy Robsart; fourth, Mr. C. F. Thurstan with Polly Bruce. For a bright purple edge Mr. Artindale was first with Harry Kenyon; second, Mr. Cartwright with Lavinia; Mr. W. H. Lewis third and fourth with Somerhill. For a heavy rose edge Mr. C. F. Thurstan was to the fore with Lady Louisa; second, Mr. E. C. Rossiter with same variety; third, Mr. Cartwright with Little Phil; fourth, Mr. A. R. Brown with Maggie. For a heavy scarlet edge Mr. A. R. Brown had W. H. Johnson; second, Rev. C. A. Gottwaltz with W. H. Johnson; third, Mr. A. R. Brown with same variety; fourth, Mr. F. W. Goodfellow with Clio. For a light rose or scarlet edge Messrs. Pemberton secured the first and second prizes with Fortrose; third Mr. Cartwright with Fortrose; and fourth, Mr. F. W. Goodfellow with Fortrose.

For a yellow ground Picotee, wire edge, the first and second prizes were annexed by Mr. M. C. Smith with Childe Harold; third, Mr. Cartwright with Lady St. Oswald; and fourth, Mr. A. R. Brown with Onda. For yellow ground Picotee, medium or heavy edge, Mr. Cartwright won with Daniel Defoe; second, Mr. A. W. Jones (name undecipherable); third, Mr. J. H. D. May with Euryalus; fourth, Mr. A. R. Brown with Euryalus. For a yellow ground Fancy, Mr. A. W. Jones to the front with Monarch; second, Mr. C. F. Thurstan with Broderick; third, Messrs. Artindale with Broderick; and fourth, Mr.



FLOWERS ARRANGED IN "FLORAL-AID." (See page 129).

J. H. D. May with Broderick. For Fancy, other than yellow ground, Mr. Cartwright first with Artemis; second and third, Messrs. Artindale with Muleteer, and Mr. A. R. Brown with Muleteer.

SINGLE BLOOMS, SELFS.—For a white the first and second prizes were secured by Mr. F. W. Goodfellow with Mrs. E. Hambro; third, Mr. Chatwin with Muoh the Miller; fourth, Mr. Cartwright with the same variety. For a blush or flesh Mr. Cartwright won the first and third prizes with Her Grace and Seagull; second, Mr. E. C. Rossiter with Dick Donovan; fourth, Mr. W. H. Parton with Her Grace. For a yellow Mr. D. Walker stepped forward with Miss Alley, a charming flower; second, Mr. A. W. Jones with Germania; third, Mr. Thurstan with Germania; and fourth Mr. Cartwright with Germania. For a buff or terra-cotta Messrs. W. D. Rotch, Cartwright, Parton, and A. R. Brown won with Benbow as in order named. For a rose or pink Mr. A. R. Brown won with Exile; second, Mr. Thurstan with Exile; third, Mr. Walker with Sadek; and fourth, Mr. Brown with Exile. For a salmon, pink, or scarlet Mr. Cartwright annexed the first and second prizes with Enchantress and Lady Hermione. For a scarlet Mr. Rotch won with Etna, and Mr. Tom Lord the second and third prizes with Phaeton and Sweet Brier; fourth, Messrs. Artindale. For a dark crimson or maroon Mr. A. W. Jones was first with Comet; Mr. Brown second with Sultan; third, Mr. Rotch with Boreas; fourth, Mr. Brown; fifth, Mr. Cartwright. For any other dark self Mr. Cartwright was adjudged the first and second prizes with Roseleigh Gem; third, Mr. Rotch; and fourth, Mr. Parton.

There was a grand show of Carnations and Picotees, both Show and border varieties, shown with their own foliage, but for which space will not allow of particularisation. Such as bouquets, table decorations, sprays, buttonholes, &c., formed a feature; also Sweet Peas.

PREMIER BLOOMS.—First-class certificates were awarded to Mr. Martin Smith for Childe Harold, Countess of Verulam, and Gronow Picotees; to Mr. A. R. Brown for Maggie Picotee, and to Mr. Martin Smith for Paladin Carnation. The trade was strongly represented, and the high quality of the exhibits unprecedented, a novelty being a magnificent display of Nymphæa, arranged in oblong galvanised pans of water by Mr. Amos Perry, Winchmore Hill, and to which a silver-gilt medal and F.C.C. was awarded. A similar award worthily bestowed upon Messrs. Gunn & Sons, Birmingham, for a tastefully arranged large collection of hardy flowers; also to Messrs. B. R. Davis & Son, Yeovil, for a large collection of magnificent cut blooms of Begonias. Silver medals and F.C.C.'s were awarded to Messrs. Hewitt & Co., Birmingham, for charming floral decoration; to Messrs. Dickson, Chester, for Carnations and the Californian tree Poppy, Romneya Coulteri; to Mr. J. H. White, Worcester, for a collection of hardy flowers; to Messrs. Pattison, Shrewsbury, for a collection of Violas. Bronze medals and F.C.C.'s were awarded to Mr. Robert Sydenham for a collection of Carnations arranged in vases, and to Messrs. Simpson & Sons, Birmingham, for a collection of Sweet Peas.—W. G.

Devon and Exeter Horticultural, August 2nd.

THE summer exhibition of this society took place last Friday at Northernhay. The prizes amounted in value to about £120, and included a special one offered by the president (Mr. W. B. Heberden, of Exeter). This took the form of a silver cup, value £5, and constituted the first prize in the table decoration class in the open competition department. They also included special prizes of two guineas each offered by Sir Thomas Acland, which formed the first prizes in the first and second classes in the wild flowers group. Besides the competitive exhibits there were, as usual, several honorary exhibits. Messrs. Veitch & Sons' display consisted principally of hardy plants, and stove and greenhouse plants. The centre of the group consisted of handsome Orchids, Caladiums, &c., relieved by Ferns, with a background of choice hardy Bamboos, various kinds of Lilies, and large Palms. In the foreground were several new and choice hardy plants, including Water Lilies, notably the Nymphæa Ellisiana (with rose carmine blooms), and the Nymphæa Aurora (with dark red flowers). A novelty was supplied in the shape of the Mntisia decurrens, which was shown in Devonshire for the first time. It is a native of Chili, but hardy out of doors, though requiring a peaty soil and plenty of sunshine. Its flower is a brilliant orange scarlet, measuring 5 inches across. There were also two new kinds of Gaillardia, one named Primrose Dame, with a pale yellow bloom, and another called Veitch Compact Strain, with upright flowers, a new Scabious, styled Magnifique, and distinguished by very large deep blue flowers; a Helichrysum rupestre, with white woolly leaves; a new Petunia, called Lord Courtenay, with bright rose coloured flowers; and a new fruit Elæagnus edulis, bearing red fruit, resembling elongated Cherries, and said to be excellent for preserving purposes.

Wild flowers were a feature of the show. The entries were larger than for several years past, and tended to prove what a splendid county Devon is for the study of botany, as all the specimens were distinctly local. In all the classes for teachers and students great care and skill were displayed in the arrangement of the specimens, but in the other class too many were crowded into individual vases, and gave difficulty in judging. In the amateur and cottager classes competition was good. The judges were:—Plants and flowers, Messrs. H. Michelmore (Exeter), H. J. Chapman (gardener to Mr. R. I. Measures, Cambridge Lodge, Camberwell), J. Mayne (gardener at Bicton); fruit, Messrs. S. Jones (Exeter), D. C. Powell (gardener, Powderham Castle),

and S. Lyon (gardener, Cricket St. Thomas, Chard); vegetables, Dr. T. H. S. Pullin (Sidmouth), Messrs. F. S. Hayne (gardener, St. Audries, Bridgwater), and F. Rice (gardener, The Retreat, Weston, Bath); table decorations, Mr. H. J. Chapman; wild flowers, Mr. J. Jerman (Exeter).

SUBSCRIBERS, AMATEURS, AND GARDENERS.—Twelve stove and greenhouse plants, six in flower and six foliage, distinct.—First, Mr. W. Brock, Exeter. Six ditto, three in flower and three foliage, distinct.—First, Mr. W. Brock. Six stove and greenhouse flowering plants, distinct.—First, Mr. W. Brock. Six stove and greenhouse Ferns.—First, Mr. W. Brock; second, Mr. J. H. Ley, Trehill; third, Mr. F. R. Hearn, Exeter. Miscellaneous collection or group of plants, exclusive of cork or any other ornamentation, arranged for effect in an oval, with a diameter of 11 feet by 15 feet.—First, Lady Duckworth, Exeter; second, Mr. W. Brock. Ditto, with a diameter 11 feet by 8 feet.—First, Mr. J. H. Ley. Orchids.—Second, Mr. W. Brock. Fuchsias.—First, Mr. W. Brock. Gloxinias.—First, Mr. W. B. Heberden, C.B., Exeter; second, Lady Duckworth. Lilium auratum.—First, Mr. J. H. Ley; second, Mr. W. B. Heberden. Lilliums, various.—First, Mr. W. B. Heberden. Cockscombs.—First, Lady Duckworth; second, Sir J. Shelley, Shobrooke Park. Six double tuberous-rooted Begonias, distinct.—Second, Lady Duckworth. Three ditto.—First, Mr. W. B. Heberden; second, Mr. T. Knapman, Exeter. Six single ditto.—First, Mr. W. B. Heberden. Three ditto.—First, Lady Duckworth; second, Mr. T. Knapman. Foliage Begonias, distinct.—First, Mr. F. R. Hearn; second, Mr. W. B. Heberden. Caladiums.—First, Lady Duckworth; second, Mr. W. B. Heberden. Dracænas.—First, Mr. W. B. Heberden. Zonal Pelargoniums, single, distinct.—First, Mr. W. Brock; second, Lady Duckworth. Zonal Pelargoniums, double, distinct.—First, Mr. H. Turner, Exeter; second, Mr. T. Knapman. Coleus.—First, Mr. H. Turner; second, Mr. M. Farrant, Exeter.

FRUIT.—Collections of fruit, eight dishes.—First, Mr. S. Eady, K.C., Weybridge. Collections of fruit, five dishes.—First, Lady Duckworth; second, Rev. A. W. Hamilton-Gell, Winslade; third, Sir D. Duckworth-King, Exeter. Black Hamburgh Grapes.—First, Sir John Ferguson-Davie, Crediton. Muscat of Alexandria Grapes.—First, Mr. S. Eady. Grapes, any other variety.—First, Mr. S. Eady; second, Lady Duckworth. Pine Apple.—First, Mr. P. Hoare, Dawlish; second, General Sir Redvers Buller, Crediton. Peaches.—First, Mr. S. Eady; second, Sir D. Duckworth-King; 3, Mr. T. Knapman. Nectarines.—First, Rev. A. W. Hamilton-Gell; second, Mr. T. Knapman; third, Mr. S. Eady. Melon, green or white flesh.—First, Rev. A. W. Hamilton-Gell; second, Sir D. Duckworth-King; third, Sir J. Shelley. Melon, scarlet flesh.—First, Lady Duckworth; second, Sir D. Duckworth-King. Apricots.—First, Mr. J. Milford, Thorverton; second, Mr. H. C. Biddell, Exeter. Pears.—First, Mr. W. B. Heberden; second, Mr. Kekewich, Peamore. Apples, dessert.—First, Mr. F. R. Hearn; second, Mr. M. Farrant. Apples, kitchen.—First, Rev. S. P. Coldridge; second, Mr. W. B. Heberden. Plums, red or purple.—First, Mr. T. Kekewich; second, Sir D. Duckworth-King. Cherries.—First, Mr. H. Turner; second, Miss Drew, Kenton. Currants, red.—First, Mr. J. Jerman; second, Mr. W. J. Gibbings, Topsham. Ditto, white.—First, Sir J. Shelley; second, Mr. H. Turner. Gooseberries.—First, Mr. T. Kekewich; second, Sir J. Shelley. Tomatoes, dessert.—First, Mr. J. H. Ley; second, Lady Duckworth. Any other variety of fruit.—First, Mr. J. Jerman; second, Mr. T. Kekewich.

VEGETABLES.—Collection of vegetables, twelve kinds.—First, Sir J. Shelley; second, Sir D. Duckworth-King; third, Lady Theodora Guest, Henstridge; fourth, Mr. W. C. Cleave, Crediton. Collection of vegetables, six kinds.—First, Lady Duckworth; second, Mrs. Savile, Exeter; third, the Rev. E. E. Heathcote.

BRITISH WILD FLOWERS.—The most complete collection of wild plants indigenous to Devonshire, properly dried and mounted on stiff paper, arranged under their natural orders, the flora used being mentioned, with the correct Latin names and the locality of any specimen stated on each sheet, made by a teacher or assistant teacher in a school in Devon.—First, Miss M. J. Shute, Tawstock; second, Miss H. A. Langdon, Trusham. Ditto, made by any student in a school in Devon.—First, Miss Ivy Berry, Exeter; second, Miss Faith Ashford, Exeter; third, Miss D. Shorto, Exeter. Species collected in Devonshire, stating locality where collected, with their Latin and common names and natural orders according to the "Student's Flora," by Sir J. D. Hooker.—First, Mr. D. K. Macalister Bampton; second, Miss Amy Waller, Exeter.

AMATEURS (NOT EMPLOYING A GARDENER) AND COTTAGERS ONLY.—Geraniums.—First, Mr. F. J. Lovill, St. Thomas; second, Mr. H. Gardiner, Kenton. Asters.—First, Mr. G. Hellins, Kenton; second, Mr. F. J. Lovill; third, Mr. C. Marks, Alphington. Bouquet.—First, Mr. F. J. Lovill; second, Mr. V. D. Truman, Kennford; third, Mr. G. Hellins. Roses.—First, Mr. H. Anstey, St. Thomas; second, Mr. G. Enticott, Shute; third, Mr. S. Enticott, Shute. Potatoes.—First, Mr. H. F. Wilson, Meavtree; second, Mr. H. Gardiner; third, Mr. A. Truman; fourth, Mr. S. Enticott. Onions.—First, Mr. F. J. Lovill; second, Mr. H. Anstey; third, Mr. G. Hellins. Peas.—First, Mr. J. Copp; second, Mr. G. Hellins; third, Mr. H. Gardiner. Runner Beans.—First, Mr. F. J. Lovill; second, Mr. R. Sampson; third, Mr. H. Gardiner.

Certificates of merit were awarded to Messrs. Jarman & Co., Chard; Curtis, Sanford & Co., Torquay; R. Veitch & Son, Exeter; and the Devon Chrysanthemum Co., Teignmouth. Numerous awards were also given for cut flowers and collections of single kinds of vegetables.

Basingstoke, August 5th.

A much improved show was that held in Golding's Park on the date named, was the general opinion of those qualified to know. The competition was especially keen, no less than four marquees being required to hold the exhibits. Plants, though not numerous, added much to the interest of the show. For a group of miscellaneous plants arranged in a semicircle, effect to be the leading feature, there were four exhibits, making a pleasing display on one side of the tent. Mr. W. Peel, gardener to Miss Todd, Shirley, Southampton, secured the leading award with suitable material lightly disposed. Mr. Best, gardener to R. F. Leyland, Esq., The Vine, Basingstoke, was a close second; Mr. C. Harvey, gardener to W. W. Portal, Esq., Southington, Basingstoke, a creditable third. Specimen plants were not numerous, and lacking but little in quality. For nine distinct Mr. W. Peel secured the leading place with medium-sized examples of *Cycas revoluta*, *Phoenix rupicola*, *Croton Queen Victoria*, *Erica Austiniana*, *Allamanda Williamsi*, and *Ixora Williamsi*. Mr. Peel also secured the premier award for four foliage plants, and also for four flowering subjects, one flowering and one specimen foliage, in all classes staging creditably.

Mr. Peel with healthy specimens secured the leading award for six exotic Ferns; especially noticeable were handsome plants of *Adiantum cardiochlaena*, *Davallia fijiensis*, and *Davallia Mooreana*. Mr. W. Green, gardener to S. Bates, Esq., Manydown Park, Basingstoke, was a close second. *Coleus* and tuberous *Begonias* were finely shown, Mr. Best securing the leading award in the former, and Mr. S. Clifton, Winchester, in the latter class.

Cut flowers were quite a feature of the show. For twenty-four Roses, distinct, Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, was an easy first with medium-sized blooms beautifully fresh. Noticeable in this exhibit were representative blooms of *Madame Hoste*, *Marquise Litta*, *Mrs. J. Laing*, *Prince Arthur*, *The Bride*, *Mrs. Sharman Crawford*, and *La France*. Mr. J. Dauncey, Hook, second with smaller but fresh blooms. In the class for twelve Tea Roses the competition was not numerous, but the quality of those shown was creditable. Mr. Neville repeated his previous success, winning premier award for really good blooms of *Maman Cochet*, *Muriel Grahame*, *White M. Cochet*, and *Medea*; Mr. W. Hunt, gardener to S. Moss, Esq., Fern Hill, Blackwater, second. Mr. Neville also won first place for twelve H.P.'s, and also for twelve Carnations, staging well in both classes.

Herbaceous flowers made a bold display, so well were they staged in the classes set apart for them. For twelve varieties, Mr. B. Ladhams, The Nurseries, Shirley, Southampton, was an easy first prizewinner with a noble collection, consisting of *Phlox Countess Radnor*, *Platycodon grandiflorum album*, *Gaillardia Rownham's Queen*, *Coreopsis Eldorado*, *Dracocephalum speciosa*, *Gaura Lindheimeri*, *Zauschneria californica speciosa*, and *Tritoma Otto Froebeli*. Mr. Hunt was distinctly a creditable second.

Prizes were offered for the best collection of cut flowers grown out of doors, to fill a space of 6 feet table run, quality and general effect to be the leading feature. Three competed, making a pleasing display. Mr. Hunt secured the premier award with an exhibit containing many superb examples, tastefully arranged with *Eragrostis elegans*. Mr. W. Tamplin, gardener to W. R. Mitchell, Esq., Down Grange, Basingstoke, second. Cactus Dahlias were splendidly shown for so early in the season. For twelve distinct Mr. S. Clifton, Winchester, was an easy first prizewinner, staging perfect examples of *Captain Broad*, *Mrs. C. Page*, *Britannia*, *Red Rover*, *A. Vasey*, *Mrs. Turner*, and *Magnificent*. Sweet Peas were a distinct feature. Five competed for six bunches, Messrs. Hunt and Clifton securing first and second prizes with good exhibits of popular varieties.

Fruit was numerous in most classes, while in all the quality was excellent. For a collection of six dishes Mr. Bowerman, gardener to Lord Bolton, Hackwood Park, was the only exhibitor, to which was awarded the premier prize. Black Hamburg Grapes, Humboldt Nectarines, Barrington Peaches, St. Ambroise Apricots, and a good Melon were the principal dishes. For two bunches Black Hamburg Grapes there was a spirited competition, Mr. J. Foster, gardener to Lionel Phillips, Esq., Tylney Hall, Basingstoke, won the leading position with superior examples in every respect. Mr. Bowerman second, Mr. Tamplin third. For two bunches any other black Grape Mr. Bowerman, with Appley Towers was first, followed by Mr. G. Best with Gros Maroc. Mr. Bowerman with Buckland Sweetwater, nicely coloured, won for two any white Grape other than Muscats; Mr. Tamplin followed with Foster's Seedling. Hardy fruit was remarkably well shown, especially Apples, Cherries, and Plums.

Vegetables were, as they always are here, a feature of the show. For eight distinct varieties Mr. Bowerman led with a grand exhibit. Ailsa Craig Onions were superb, the Major Potato, New Intermediate Carrot, and Perfection Tomatoes were the salient dishes; Mr. Best a good second. For the prizes offered by Messrs. Sutton & Sons there was a spirited competition. Mr. Bowerman just succeeded in beating Mr. Kneller, gardener to Sir Wyndham Portal, Malshanger Park, Basingstoke; both staged grandly. Enormous were the Onions, Ailsa Craig, in the latter collection. There was keen competition in the single dish classes for Cnouters, Tomatoes, Onions, and Carrots.

Non-competitive exhibits were an interesting feature of the show. Mr. B. Ladhams, Shirley, staged a capital collection of herbaceous

flowers, consisting of popular as well as choice kinds. Messrs. G. Jackman and Sons, Woking, had also an interesting exhibit of herbaceous flowers and Roses, the latter being especially bright and good, staged as they were in bunches. Messrs. Toogood & Sons, Southampton, had a smaller display.

A tent was specially devoted to exhibits of ladies' table decoration. For the best decorated table for six persons there were five competitors, making an interesting display. Miss Burtt, Winterbourne, secured the premier position with an exhibit that combined lightness and harmony of colour without being in any way crowded. The class for a floral basket arranged for effect brought several exhibitors. That from Miss Wadmore, Basingstoke, was infinitely superior to all others. Mrs. Thorne had the best stand arranged with flowers and fruit. Miss Gosling had an effective arrangement of wild flowers, berries and grasses, which was much admired.

Royal Caledonian Horticultural Society.

An advance prize schedule for the spring show of the Royal Caledonian Horticultural Society is now to hand. Special attention is directed to the change of date from 3rd and 4th of April to 7th and 8th of May, thus bringing this show more in line with the "Temple" of the South. It will in many ways prove acceptable to the majority of exhibitors. By having the show at this later date less forcing will be required, and the result ought to be a large increase of entries. It is, however, regrettable that the council have resolved to do away with all the competitive classes in the nurseryman's section, but they will, as heretofore, grant awards to meritorious exhibits. The council deserve to be complimented on the competition they have resolved to inaugurate for assistant gardeners, which consists of a sketch plan with sections of a mansion with surrounding grounds to the extent of 20 acres, of which a plan has to be drawn to the scale of 40 feet to the inch, for kitchen garden, flower garden, and pleasure grounds. The sketch plan shows all that is actually in existence on the ground, and the competitive plan must be accompanied by a short written description, stating (1) what extent would be utilised for each purpose, (2) how roads would be made, (3) how planting would be done, (4) the character of the planting, (5) any other particulars which, in the opinion of the competitor, would help to a correct judgment of the plan, and (6) which is optional, any suggestions. Full particulars and copies of schedules may be had of P. Murray Thomson, Esq., S.S.C., 5, York Place, Edinburgh.

Scottish Arboricultural.

The members of the Royal Scottish Arboricultural Society started from Edinburgh early this week on their twenty-fourth annual excursion. Leaving the Caledonian Station at four o'clock, the party, numbering eighty-seven, proceeded to Ayr, which will be their headquarters until Friday morning, 9th August. On Tuesday a visit was paid to Burns' Cottage and Monument at Auchendrane, the remainder of the day being spent at Cnlzean Castle. In the evening the annual excursion dinner of the society took place, followed by the general business meeting. Wednesday was occupied largely by visits of inspection to the works of well-known Ayrshire firms which make a speciality of agricultural manufactures. On Thursday the party will visit Sundrum, Barskimming, Ballochmyle quarries, Mauchline, Montgomerie, and Auchencruive; and on Friday, the concluding day of the excursion, the party will travel to Glasgow, and spend the day in the exhibition.

Kirkbean and District.

This show was held at Carsethorn, by Dumfries, N.B., on August 2nd, and was very successful, there being a considerable increase in the number of entries, and a general improvement in the quality of the exhibits. A conspicuous feature of the show was a fine table of plants from the gardens of Colonel Blackett of Arbigland (gardener, Mr. W. Houlston), which was much admired. Messrs. Kerr Bros. of Dumfries staged a number of bunches of the newest Sweet Peas and Cactus Dahlias, both being appreciated by the numerous visitors. A charming stand of Carnations and Picotees from the nursery of Mr. James Kennedy, Greenbrae, Dumfries, was also worthy of special notice. In the competitive classes there was good competition, the principal prizewinner in the horticultural department being Mr. R. A. Austin, Mainsriddle, who was closely followed by Mr. R. Major, Carsethorn. Fruit was a fine class, the Gooseberries and Currants from Mr. Joseph Robson, North Carse, in particular being of special merit. Messrs. S. Arnott and Joseph Harris were the honorary secretaries.

Scottish Horticultural.

The monthly meeting of this association was held on the 6th inst., Mr. Bird, Raehills, Lockerbie, read a paper entitled "Judging at Country Shows." Among exhibits were a beautiful plant of *Miltonia rubellum*, from Mr. Geo. Wood, Oswald House; an elegant vase of Roses of choice sorts from Mr. Todd, Stoneybank, including fine blooms of *Caroline Testout*, *Saiserin Augusta Victoria*, *Bardou Job*. Mr. Todd also showed a beautiful pot of a new early flowering Comet Aster, and two vases of *Mignonette* of very fine quality. Spikes of *Bougainvillea* from Mr. Fordyce, Bonally, and a handsome display of herbaceous and other flowers from Mr. Grieve, Redbraes. The next meeting was intimated to be held on the second Tuesday of September, for the convenience of visitors to the autumn show of the Caledonian Horticultural Society.

Bitterne and West End Horticultural.

The twelfth annual exhibition of the above society was held on Wednesday, 31st July, at The Shales, Bitterne, the residence of Col. E. K. Perkins, V.D. This is a record year for the society, and the secretary (Mr. G. Elliott) with the committee are to be congratulated on their success. The exhibitors (156) staged 343 exhibits. The duty of judge was ably carried out by Mr. J. Amys, gardener to Mrs. Eliot Yorke, Hamble Cliff. The chief prizewinners were Messrs. Jacob Moody, Thos. Curtis, and James Dymott, who all reside at Moor Green, a very fertile strip of land in the parish of West End. Mr. J. Moody gained the R.H.S. medal with his collection of vegetables. Groups not for competition were shown by Mrs. Thomas Harefield (gardener, Mr. Farman), and Col. Willan (gardener, Mr. G. Busby); collection of fruit, Mrs. Thomas; collection of vegetables, Rev. C. R. Patey, West End Vicarage (gardener, Mr. J. Chamberlain). The fruit and vegetables were well up to the average, and the competition in some of the classes very keen. Wild flowers and Grasses are always a great feature at this show. The following are a few of the principal exhibits and awards:—Vegetables, salads, and herbs.—First prize and R.H.S. medal, Mr. Jacob Moody; second, Mr. Thos. Curtis; third, Mr. James Moody. Six dishes vegetables (Mr. H. Osman's prize).—First, Mr. T. Curtis. Fruit (four varieties).—First, Mr. J. Moody; second, Mr. T. Curtis; third, Mr. J. Dymott. Bouquet of Flowers, Ferns, and Grasses.—First, Miss Ealley; second, Mr. F. B. White; third, Mr. J. Dymott. Collection of Asters and Dahlias (cut flowers excluded).—First, Mr. J. Dymott; second, Mrs. Webster; third, Mr. F. B. White. Wild flowers, Ferns, and Grasses.—First, Mr. Alfred Upson; second, Mr. Percy Wilshire; equal third, Messrs. A. Atkins, E. Atkins, E. Mintrum, E. Wilshire and Eva Wilshire. Gardeners' assistants' collection of nine varieties of vegetables.—First, Mr. G. Parker; second, Mr. G. Axtell.

Netley Abbey Horticultural.

The society of Bursledon, Hamble, and Hound held its annual show in the beautiful ground of Netley Abbey on July 31st. The ruins of the old abbey are a great attraction to many. This, and the fact that Netley flower show was held there on Wednesday, enabled hundreds of people to enjoy themselves in viewing the display of fruit, flowers, and vegetables arranged in two large tents. Some fine specimen plants were sent by Mrs. Eliot Yorke from the grounds and houses at Hamble Cliff (Mr. J. Amys, the gardener, has officiated as judge at this show for twenty-five years in succession). Groups of fine-foilage plants came from Col. the Hon. H. G. L. Crichton, fruits from Lord Rashleigh, Carnations from Mr. W. Garton, jun., which included blooms of Miss Sheila Garton; group of foliage plants from Miss Rashleigh and Messrs. W. Rogers & Son, Red Lodge. The judges this year were Mr. E. Wills, Shirley; Mr. Chapman, Salisbury. Division 2.—For group of plants, plants in flower, foliage plants, fruit, Potatoes, vegetables, Ferns, Roses, and basket of flowers, Mr. Vokes was first. Group of plants and collection of vegetables.—First, Prof. Biles (gardener, Mr. F. Harris). Fruits and vegetables.—Mr. H. E. Willshire. Vegetable prize (presented by Messrs. Toogood & Sons, Southampton).—First, Mr. Vokes.

North and South Stoneham and Chilworth.

The annual exhibition in connection with the above society took place on Wednesday, July 31st, at North Stoneham House, by kind permission of J. Willis-Fleming, Esq., J.P. The exhibits of fruit, flowers, and vegetables were staged in the spacious rooms of the house, which are in themselves a great attraction, and taken as a whole the arrangements were excellent. In the cottagers' department some good vegetables were shown, also some magnificent fruit, the Currants and Gooseberries being finer than previous years. Groups not for competition were arranged by Messrs. Rogers & Son, Red Lodge Nurseries. Messrs. Ladhams, Shirley Nurseries, had a grand stand of herbaceous out bloom, which added greatly to the show, while a splendid collection of fruit came from the grounds of Chilworth Manor, the seat of Mr. J. Willis-Fleming, Mr. W. Mitchell (gardener) being noted for his fine exhibits, not only locally but at such shows as the Crystal Palace and those held in London. The duty of the judges was carried out by Messrs. Ladhams, F.R.H.S., and W. Mitchell. In the evening the prizes were distributed by Mrs. J. Willis-Fleming. The following is a list of a few of the successful ones. Collection of eight vegetables.—First, W. Hephherd, Esq. (gardener, Mr. Stratton); second, Mr. W. Follett. Collection of fruit.—First, Mr. A. Searle; second, Mr. Tubb.

Tomatoes.—First, Mr. R. E. Owton; second, Mr. Tubb. Gooseberries.—First, Mr. W. Barnes; second, Mr. H. Knott. Raspberries.—First, Mr. J. Cox; second, Mr. H. Coward. Red Currants.—First, Mr. Smith; second, Mr. T. Heath. White ditto.—First, Mr. H. Knott; second, Mr. J. Cox. Black ditto.—First, Mr. H. Knott; second, Mr. J. Cox. There was a numerous list of awards, of which the above were the principal.—J. M.

Bristol and District Gardeners'.

The monthly meeting was held at St. John's Parish Room, Redland, on Thursday, July 25th, Mr. A. J. Hancock presiding. The lecture on "Carnation Culture" was given by Mr. Skinner of Stoke Bishop. Dealing first with the Malmaison tribe, he gave very clear details for successful cultivation, advising propagation by layers, which should be done in July, potting as soon as rooted, and into flowering pots in September. The compost he recommended was loam and leaf mould, with a little peat and sand. He urged the need for great care in watering, advising Clay's as the best fertiliser. Tree Carnations, he said, should be propagated by cuttings put in early in the year and grown on in much the same way as Malmaisons, all stopping to be done by August, the plants to be put in their winter quarters by the end of September. For these, too, great care was required in watering and ventilating. Touching on border Carnations, he recommended beds, if possible, with a south-west aspect, planting to be done in the autumn or March according to circumstances. Mr. Skinner gave much valuable information on the general culture of these favourite flowers, the insect pests to which they were liable, and methods of eradication, concluding

by claiming for Carnations that for perfume or for decoration they were second to none. The hearty thanks of the meeting was accorded him for his lecture. Prizes for six bunches Sweet Peas were awarded Mrs. Talmadge (gardener, Mr. Harford), Mr. W. Howell Davies (gardener, Mr. Curtis), and Mr. Nash (gardener, Mr. Barrow); for six Carnations, Mrs. Talmadge and Mr. Spry. Certificates of merit went to Mr. T. D. Sibly (gardener, Mr. Lee), for *Cattleya Leopoldi*, and to Mr. Ambrose for basket of Peas.

Liverpool Amateur Gardeners'.

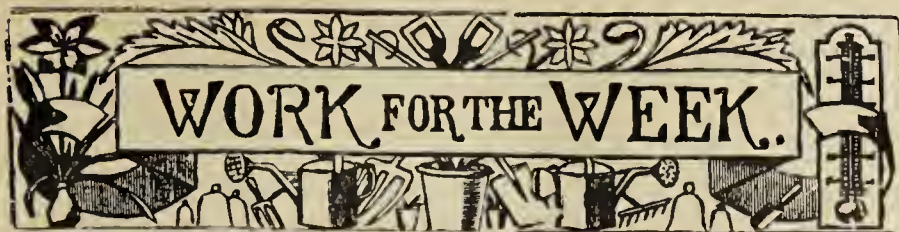
The monthly meeting was held in the Common Hall, Hackins Hey, on Thursday evening last. The cut flowers were of an exceptionally choice character, Mr. A. Dodd winning the open class with a rich variety of cut Gloxinias. The president's class was divided between Mrs. Morris and Mr. Robins, the latter of whom had the best single Begonias. He divided with Mr. Ellison for the double Begonias, and most worthily won with a splendid lot of Cactus Dahlias. Mrs. Stevenson took firsts with Tomatoes and Gladioli; she also won the president's prize for plant in bloom with a well-flowered Fuchsia, while a bold-looking *Lilium auratum* secured to her the open class for the best flowering plant. The prize for table decoration was divided between Miss Hunter and Mrs. Stevenson, while in border flowers the victor was Mrs. Morris. Mr. Tinsley carried off the special prize for Carnations, and Misses Hunter and Davies, Messrs. Cangle, Dale, Morris, and Ellison were numbered among the winners of second and third prizes.—R. P. R.

Halesworth, Suffolk.

This was held on July 25th in the grounds kindly lent by H. A. Mullins, Esq. Three marquees were erected by Messrs. E. Dennington and Co. of Halesworth, one being devoted to flowers and pot plants, another to the table decorations, and a third to the cottagers' exhibits. The secretarial duties were efficiently carried out by Mr. E. Roe, who was assisted by Mr. F. A. Tipple (treasurer), and a large working committee. The weather being all that could be desired there was a large attendance in the afternoon. There was a very decent show of Roses, Miss Williams, Wrentham, and Rev. A. R. Upcher and other local exhibitors being successful prizewinners. In the class for plants in pots Halesworth exhibitors were to the front. The assortment of fruit and vegetables was most creditable, the Currants, considering the dryness of the season, being very large; whilst, in the opinion of the judges, the Onions were the finest seen at any show in the neighbourhood this year. In the latter class Captain Lavett-Scrivenor (a prominent exhibitor throughout) was first, Mr. Kerry second, and Rev. A. R. Upcher third. The table decorations were very effectively arranged, that of the first prizewinner, Mrs. F. J. Billing, being both light and tasteful. The band of the F Company 1st V.B.S.R., under the direction of Bingle-Major F. J. Cowles, played a capital selection of music. In the evening, when there was again a large attendance, a fancy dress cycle parade was held.



GOOSEBERRY COBHAM SEEDLING. (See page 124.)



Hardy Fruit Garden.

Strawberries.—*Cleaning Beds.*—The bulk of the Strawberry crop is over, and attention is now required by established beds in the matter of removing runners and weeds. After the recent heavy rain both runners and weeds will grow remarkably quickly, and become a crowded mass of luxuriant vegetation, which is of course robbing the soil of much nutriment, and hindering the established plants receiving a due supply of food and moisture for building up the buds for the succeeding year. Strong, deep-rooted weeds are difficult to eradicate, but in the process of clearing the beds a good opportunity is afforded of forking them out entirely. If runners are wanted for forming new beds the best of them must be selected during the process of clearing, removing all weeds and superfluous wires, and leaving them clear upon the ground, ready for lifting and planting at the first opportunity, if that is likely to be soon. If not, lift and plant them temporarily on good, firm, but not rich ground, endeavouring to do so with balls of soil attached.

Rooting Runners.—Where young and promising plantlets are not sufficiently rooted, small mounds of soil should be raised about them, and they may be secured upon them with pegs or a stone. They will soon root into the material, and form thrifty young plants with an abundance of roots. Cut off the wires beyond the plantlet, and immediately rooting commences detach the wire from the parent plant. Care ought to be taken to root only runners from fruitful plants. Pots may be employed to root the runners in if this method is more convenient. Partially sink the pots in the soil, so as to steady them and prevent rapid drying. Secure the runners on the soil with a stone, and give water daily in dry weather. Sometimes water will be necessary twice daily.

Spring-planted Beds.—The plants ought now to be strong, healthy, and stocky. Runners will again be forming upon them, and should be removed close to the plants. Also clear away weeds, and slightly hoe over the ground between the rows. Cleanliness of the soil will all be in favour of the plants making bold crowns. This is better than the production of luxuriant foliage. Mulching the soil heavily with manure the first season is productive of the latter in very young stock, and should not be practised.

Preparing Ground for New Beds.—The preparation of the soil for planting new beds should be proceeded with as soon as possible. Deep digging, if not trenching, is essential, and the application of plenty of manure well worked in. Where the ground has not been well worked for some time, trenching ought to be the rule, especially if new beds have to be made on the same site as old ones. It is advisable where practicable to prepare a fresh situation, as Strawberries, like other things, enjoy a change of ground. In trenching, the complete reversal of the spits of soil can be carried out if the subsoil is good, but if this is not the case then bastard trenching should be adopted; that is, deeply working the ground, but leaving the spits of soil in the same position as before. Before planting make the ground firm by treading well in dry weather.

Planting.—So long as plants are well prepared by seeing that they are well furnished with roots before transferring them to their position, there is but little fear that they will succeed. If rooted in pots or turves both should be well furnished with abundance of roots, and the material must be moist. From the open lift runners with balls of soil attached, and plant at once without the soil becoming dry. The rows may be from 2 feet to 2 feet 6 inches apart, the plants being placed from 18 to 22 inches asunder in the rows. Should the weather be very dry at the time of planting place each plant in a shallow basin, so that water can be readily applied until they are established. When they have an ample amount of soil attached to the roots planting is an easy matter, but when the roots are bare they ought to be spread out on small mounds, carefully covering them from the crown outwards in order not to turn up the points of the roots. Make the soil firm about them.

Protecting Wall Fruit.—It is very important to protect ripe Apricots, Peaches, Nectarines, and Cherries, also Gooseberries and Currants, from attacks by birds, wasps, and flies. Very choice specimens of the former fruits may be separately protected by enclosing each in muslin bags, which will also prevent them being injured by premature falling. To enclose the whole trees hexagon netting is suitable material, and it ought to be hung so that it is able to catch any falling fruits, but much fruit may be gathered in excellent condition before it is ready to fall. Many wasps and flies may be attracted into wide-mouthed bottles hung about the trees if these are half filled with honey water or sweetened beer. In old walls earwigs and woodlice are troublesome. Their depredations may be largely prevented by giving due attention at the

proper time to filling up holes and cracks between the bricks, or repointing. Ripe Red and White Currants may be kept some time on north or east walls if a good net is hung in front. The side shoots may be well shortened back to enable the fruit having the benefit of a good circulation of air, and so that the net can hang with the least possible obstruction. The summer pruning of wall Plum trees should be completed in order that the ripening fruit may be protected as soon as colouring commences.—LYMINGTON, *Hants.*

Fruit Forcing.

Cherry House.—The trees that were started early in the year are ripe in wood and plump in bud. The leaves, too, will not be capable of much further effort in elaborating the sap and storing it in the buds and adjacent wood, therefore undue excitement will cause the trees to start into growth, which must be guarded against by exposure to atmospheric influences as far as the house will admit, which is the best means of averting premature growth, to which the Cherry is liable when forced year after year successively. The border must not be allowed to become parchingly dry, but have a copious supply of water when necessary for keeping it in a moist condition, and if the trees are weak afford liquid manure. To subdue red spider, give an occasional watering with the garden engine or syringe, and, if needful, apply an insecticide, but by all means remove the roof-lights, the cleansing influence of rain and invigorating tendency of dew, with the thorough moistening of the border, having a beneficial effect. Black fly, or *Aphis cerasi*, can hardly be kept from Cherry trees for any length of time, but the leaves and wood at this season, from their hard texture, are not inviting to them, yet if they appear on the laterals promptly use quassia extract, nicotine soap, tobacco water, or dust the affected parts with snuff or tobacco powder after damping them. The narcotic is fatal to these somewhat hardly-killed insects, and it deters egg deposition on the young shoots.

Cherry trees in pots are the most interesting of all fruits grown that way; they offer such a variety, and afford fruit over so long a period, that it is remarkable they are not more commonly seen. With very slight forcing they ripen the crop in May, and continue to afford a succession up to August. In a house without heat, but light and well ventilated, ripe Cherries can be had early in June, and a succession may be maintained, with proper care, up to September inclusive. Belle d'Oileans, Early Rivers, Empress Eugénie, May Duke, Archduke, Governor Wood, Black Eagle, Emperor Francis, Florence, and many other varieties are excellent. For planting out, Early Rivers, Elton, Governor Wood, and Black Tartarian afford good crops of large fruit. Trees in pots must be regularly watered and syringed to maintain the foliage in health as long as possible.

Peaches and Nectarines.—*Early Forced Trees.*—In the houses started in December or January to give a supply of ripe fruit early in May, the trees will soon part with some of their leaves, but it must not be accelerated by the roots being deprived of moisture, for it is important that the soil be kept in a moist yet not a saturated condition, as the former will cause the buds to drop and the latter induce premature growth, both of which must be guarded against. As a safeguard against casting the buds, allow such lateral extension as is necessary to appropriate any excess of sap, a few green laterals doing that perfectly. Early forced trees do not usually make strong growth, and they form far too many blossom buds, therefore the pruning needs to be carefully performed, as many are mainly studded with that description of buds, with wood buds at the base and extremity only, and it is necessary to retain a wood bud at the latter point, not cutting back next year's bearing wood unless the shoots are of great length, and then to a wood bud. Where disbudding has been properly attended to, no more wood being retained than is required to replace the bearing shoots of the current year and to renew worn-out growths, as well as to supply wood for the proper extension of the trees, very little pruning will be needed. Weakly trees require the smaller growths cut out, so as to impart more vigour to those retained, for the weak shoots afford much smaller fruit than the moderately vigorous and well-ripened growths. Some trees grow too vigorously, and must be lifted to induce a sturdy fruitful habit, and weakly trees should have the old soil carefully removed from amongst the roots, supplying fresh turfy loam of a calcareo-argillaceous nature. Give a good watering both to the lifted trees and to those that have had the soil removed about the roots. These operations require to be performed as soon as the leaves are mature and before they fall from the trees, syringing the trees and shading whilst the work is in progress, and for a few days afterwards if the weather is bright.

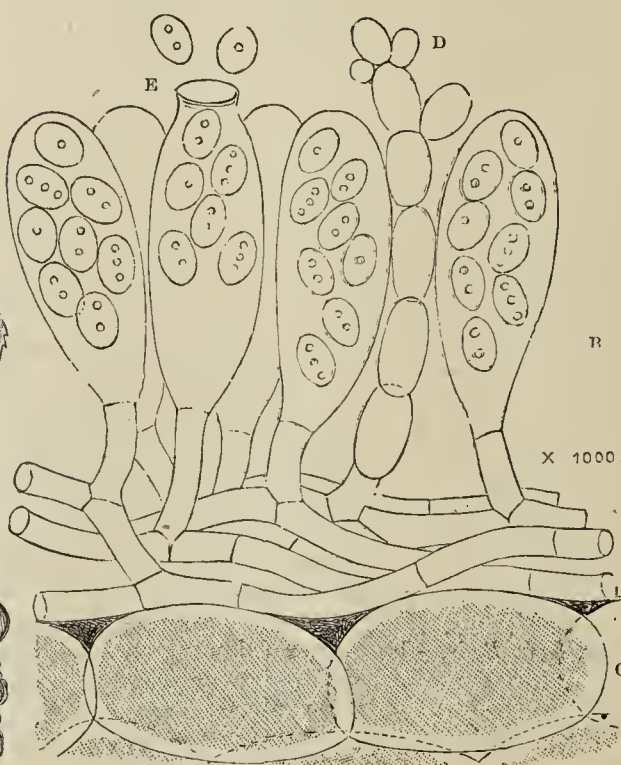
Succession Houses.—As the fruit is cleared from individual trees cut away the shoots that have borne fruit unless required for extension, and all the shoots where the growths are too crowded should be thinned. This will allow of cleaning operations being more effectively performed, it being imperative that the foliage be kept clean and healthy. With the freer access of light and air the buds will form perfectly and the wood ripen thoroughly, provided attention is given to a due supply of water to the roots. The house will need full ventilation day and night, and where the roof-lights are movable and the trees not very vigorous they may be removed when the buds are plumped. Where the fruit is ripening a free circulation of air will enhance the quality considerably.

supplying sufficient water to keep the foliage in good condition, and securing air moisture by damping the floor and borders in the morning and afternoon, as an arid atmosphere favours thrips and red spider, and the premature ripening of the foliage; dryness at the roots also favours these pests, tends to the fruit ripening unduly, and may render it mealy. A slight shade is sometimes beneficial when the sun is powerful, and the apex of the fruit fully exposed to its rays beneath large panes of glass, to prevent the fruit ripening too quickly and becoming discoloured at the apex, or when it ripens in excess of the demands. Ants are sometimes very troublesome on such fruits, especially Nectarines, eating into the choicest at the apex. Poisons are not safe to use at such times. The most suitable means of riddance is to place some partially picked bones, such as come from table, in their haunts, and when they are feeding on the meat place them in boiling water. The bait should be dried before using again, and this persisted in will clear a house of the ants.

Late Houses.—The wood should be laid in thinner than is customary with trees in earlier houses, so as to give it a better chance to ripen, and the foliage advantage to assimilate food, and store it up in the wood, whilst the buds are perfectly formed. Attend, therefore, to thinning and regulating the growths. Gross shoots tend to impoverish the weaker, appropriate an undue amount of sap, prevent an equal distribution of the nourishment, and are seldom fruitful; they mostly fall a prey to gum disease, and are best removed in favour of less exuberant growths, striving to secure an even spread of moderately strong short-jointed wood. Ventilate freely in the early part of the day, allow a good heat from sun through the day, and close in good time, so as to run up to 85°. This will only be necessary where the fruit is required accelerated in ripening. Sun heat will not do any harm after evaporation has been going on for some time, but it is desirable to admit a little air before nightfall to allow the pent-up moisture to escape, and the gradual cooling of the house will induce rest. Early ventilation is necessary for the solidification of the growth. Forcible syringings will keep the trees free from red spider, and should be continued until the fruit commences to ripen. Keep the borders well supplied with water or liquid manure.—**ST. ALBANS.**



PEACH BLISTER, WITH ACCOMPANYING FUNGUS ASCOMYCETES DEFORMANS.



Peach blister as commonly seen; when the fungus is present a white bloom may here and there be detected on the red blister, and this bloom when magnified one thousand diameters linear is seen as shown at B. It is excessively minute as compared with the thickness of the leaf and its component cells; the latter magnified to the same scale are seen at C. The fungus consists of a stratum of fine threads, which throw up a series of small flask-like bodies (asci) filled with spores, the flasks being mixed with necklace-like growths D, which are clearly a

second form of fruit. Each ascus, or flask, contains eight spores, which at certain moments open at the top, as at E, and discharge their spores (which are analogous with seeds) into the air to continue the existence of the species elsewhere. This shows most clearly the fungus (*Ascomycetes deformans*), which was working such mischief in the leaves. You will now see what is the matter with your Peach leaves; but as to the cause of it there is a great divergence of opinion. The majority of scientific men regard the fungus as the actual cause of the evil; the majority of gardeners, on the contrary, regard it as the results of a predisposing cause—namely, cold winds that check the growth of the leaves and rupture the sap vessels, thus providing a suitable nidus for the germination of the spores of the corroding parasite. An excellent gardener has written:—"Peach blister is caused by the exposure of the expanding foliage to the influence of frost or cold cutting winds. Here are a few examples:—1, Upon a west wall every tree is perfectly healthy, with a free, strong, unchecked young growth clothed with fine foliage, perfectly clear and quite free from blister or blemish of any kind. 2, Upon a south outer wall, along which the cold east wind swept unchecked, the foliage of every tree, both Peach and Nectarine, is much blistered; but some leaves are quite sound, and these are near the base of the shoots, and have had the shelter of the tips of surrounding shoots. Still clearer evidence of the scathing power of the cold wind is gained from a few shoots which, springing out further from the wall than the others, have their projecting tips entirely affected by blister—leaves, leafstalks, and the soft young wood itself are all discoloured, swollen, and contorted, having a miserable, sickly, gouty appearance. 3, Upon a south inner wall all the trees near the east end, and therefore having the shelter of the east wall, are quite sound; but further on, where the trees are more exposed, they are affected by blister precisely in proportion to the extent of such exposure. Cold ungenial weather is the sole cause, and we have the remedy in our hands by planting on a south-western aspect, and by affording suitable protection to trees in more exposed situations.]

Next Week's Events.

Saturday, August 10th.—Nelson and District Horticultural and Industrial Art Society's Annual Show; Keighley Horticultural Society.

Tuesday, August 13th.—R.H.S. Committees.

Wednesday, August 14th.—Clevedon Exhibition; Sevenoaks Exhibition.

Phenological Observations.

AUGUST 9TH TO AUGUST 15TH.

PLANTS DEDICATED TO EACH DAY.

9 Fri.	Linnet's song ceases.	Common Ragwort.
10 Sat.	Silver-spotted skipper butterfly seen.	Common Balsam.
11 Sun.	Dog days end.	China Aster.
12 Mon.	Swallows and martens congregate.	Tall Marsh Sowthistle.
13 Tu.	Marten's second brood fledged.	Marsh Groundsel.
14 Wed.	Goldfinch's song ceases.	Zinnia.
15 Thr.	Staphyline seen.	Virgin's Bower.

Trade Catalogue Received.

Little & Ballantyne, Carlisle.—*Bulb Catalogue.*

Names of Fruit (S. B.).—It is a difficult matter at any time to name Strawberries unless they are seen growing, but the three you sent were quite smashed, and therefore it was impossible to do so.

Spraying Apparatus (W. S.).—A good and simple sprayer is Vermorel's knapsack spraying pump "Eclair." It may be obtained of Messrs. Charles Clark & Co., 20, Great St. Helen's, London, E.C., price 36s. 6d.

Names of Plants (P. H. R.).—1, *Athyrium Filix-fœmina* (Lady Fern); 2 and 3 are the same as No. 1; the species varies considerably. No. 4, *Lastrea dilatata*, the Broad Buckler Fern. (*A. L. S.*)—*Polygonum lanigerum*; 2, *Arnica montana*; 3, *Agrostis nebulosa*; 4, *Bromus sterilis*; 5, *Bromus maximus*.

Old Mortar (Amateur).—We presume the old mortar is that from an old building, and in that case resolved into carbonate of lime with siliceous matter, in which state, freed from pieces of wood, such as old laths liable to foster fungi, it would be beneficial to all the shrubs and plants you mention, not injurious to any, and all the better with than without it. Lime is a large constituent of all the shrubs and plants you name, as found by the analyses of their ashes, and a supply is necessary for their health, growth, flowering, and even seed or fruit production. To single out any would be invidious, as a judicious dressing of old mortar would benefit all of them, especially where the ground is deficient of lime. The old mortar is not only a good thing for Carnations, Pinks, &c., but for all kinds of plants not naturally growing in peat and bog soils. If the old mortar is such as has been left over in building operations, it would be advisable to leave it on the surface of the ground for a few weeks before digging in.

Blight on Chrysanthemum Leaves (M. U. M.).—The leaves are infested with mildew, *Erysiphe Linki* in the conidial stage, and is a common parasite on *Artemisia*. It may be destroyed by spraying or syringing the plants with potassium sulphide solution, 1 oz. of potassium sulphide, popularly known as liver of sulphur, to 2½ gallons of water. Dissolve the sulphide in a quart of hot water, then make up to 2½ gallons with cold water. This is a relatively clear liquid, though having a milky appearance, and may be used without clogging at the nozzle of the sprayer. It is not only effective against mildew, but has proved successful, when taken in time, against the Chrysanthemum rust, *Puccinia hieraci* or *tanacetii*. The solution has a bad smell and discolours paint. Not so ammoniacal carbonate of copper solution prepared as follows:—Water 9 gallons; strong aqua ammonia, 26° strength, 12 fluid ozs.; copper carbonate 1½ oz. The copper carbonate is first made into a thin paste by adding sufficient water. The ammonia water is then slowly added, when a deep blue solution is obtained, which does not become cloudy when diluted to 9 gallons. This, being a perfectly clear liquid, can be used in greenhouses and elsewhere, where other preparations are objectionable, and is very effective against parasitic fungi having superficial mycelium, such as Chrysanthemum, Hop, and Rose mildew.

Tomato Sauce Making for Winter Use (G. W. D.).—The so-called sauces are really ketchups, one of the best made as follows:—Wash half a bushel of ripe Tomatoes, cut them in pieces, and remove all green portions, as they injure the colour. Cook until soft, then strain through a sieve, pressing well to obtain the pulp. For this quantity allow half an ounce of cayenne pepper and a scant teacupful of salt. Stir these into the ketchup. The spices, being dark, will injure the colour if ground and put in loose. To avoid this, bruise an ounce each of white cloves, cinnamon, allspice, mace, celery seed, and half an ounce of black peppercorns. Tie them securely in a thin muslin bag, and when the strained Tomatoes have boiled an hour and a half, put in the bag of spices and boil as much longer. Add a quart of good cider vinegar, boil for half an hour, and turn into a stone jar to cool, after which mix a pint of brandy or pure spirits thoroughly with the ketchup and bottle it, putting a strip of Horseradish root in each. Use new corks to fit the bottles, soak them in hot water, then pound in as tight as possible, and cut the cork off even with the top. Make a cement by melting together two ounces of resin and one each of beeswax and gum-shellac. Invert each bottle into the hot cement, and, when cold, dip again. Keep in a cool, dark place. Perhaps you only wish to store the Tomatoes for winter use. In that case, make a brine of salt and water strong enough to bear an egg; select perfectly ripe Tomatoes, and place them, without pressing them, in a stone or glazed earthenware jar with a deep plate, in such a manner that it presses upon the fruit, and by this simple process Tomatoes may be stored more than a year without attention. Before cooking them they should be soaked in fresh water for several hours.

Publications Received.—"Gartenflora," containing coloured plate of Begonias Gloire de Lorraine and Caledonia. "Pacific Coast Fruit World." "Agricultural Economist," August 1st; contents: State grading of produce, Agriculture in the twentieth century, &c. "Reports of the British South African Company on the Administration of Rhodesia," 1898-1900 (printed for the information of shareholders). Special attention is directed to pages 31, 81-5 in part i., and pages 180, 201 in part iii., also pages 283 to 296, and 299 to 306 in part iv., regarding fruit farming, flora and fauna, and local progress. The Company's address is 15, St. Swinburn's Lane, London, E.C. "The Woman's Agricultural Times."

Spotted Buff Moth.

ABOUT this time that caterpillar of indiscriminating palate prevails, which is the larva of the Spotted Buff moth (*Spilosoma lubricipeda* of some entomologists, and *Bombyx lubricipeda* of others). No green leaves seem to come amiss to this voracious caterpillar—those of the Elder, Turnip, Carrot, Mint, Scarlet Runner, and Broad Bean are only a few that have been known to be devastated by the same broods; and it has been justly observed that, if these creatures ever prevailed extensively, they would sweep away our crops as effectively as a plague of locusts. The back of the caterpillar is a dark greenish brown, and the under side considerably paler, and rather greener. The two colours are separated by a waving white line down each side, and the body is covered with brushes of reddish brown hair. It changes to a black



SPOTTED BUFF MOTH.

shining chrysalis, wrapped in an oval cocoon composed of silk and the hairs of its body, and attached to some fallen leaf. In this it remains through the winter, and the moth comes forth in May or June. The moth is rather more than 1½ inch across the expanded fore-wings, which are yellowish buff coloured, and the hind-wings are rather paler. All the wings are spotted with black, often as represented in our drawing, but frequently the spots are larger, and running more together. The antennae and legs are black, and the body is orange coloured, with rows of black spots down the back, sides, and underneath. Both the moth and the caterpillar should be sedulously sought for and destroyed.

Covent Garden Market.—August 7th.

Average Wholesale Prices.—Fruit.

	s.	d.	s.	d.		s.	d.	s.	d.
Apricots, 20s., 24s. ... box	1	0	to	1	3	Grapes, Muscat	2	0	to 3 0
„ ½ sieve	4	0		6	0	Lemons, Naples, case ...	24	0	30 0
Bananas	8	0	12	0		Melons, each	1	0	2 0
Figs, green, doz.	2	0	4	0		Pines, St. Michael's, each	4	6	6 0
Grapes, Hamburgh, lb. ...	1	0	1	6					

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2 0	to 3 0	Leeks, bunch	0 1½	to 0 2
„ Jerusalem, sieve	1 6	0 0	Lettuce, doz.	0 6	1 0
Batavia, doz.	2 0	0 0	Mushrooms, forced, lb. ...	0 8	0 9
Beans, French, bushel ...	4 0	0 0	Mustard and Cress, pnnt.	0 2	0 0
Beet, red, doz.	0 6	0 0	Parsley, doz. bnchs. ...	2 0	3 0
Cabbages, tally	1 6	3 0	Peas, bush.	4 0	0 0
Carrots, new, doz. bnch.	3 0	4 0	Potatoes, new English, ct.	4 0	6 0
Chicory, Belgian, lb. ...	0 4	0 0	Radishes, doz.	0 6	0 9
Corn Salad, strike	1 0	1 3	Shallots, lb.	0 4	0 0
Cucumbers, doz.	2 0	3 0	Spinach, bush.	4 0	5 0
Endive, doz.	1 3	2 0	Tomatoes, English, lb. ...	0 3	0 4
Greens, bush.	1 0	1 6	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8
Horseradish, bnch.	1 2	1 6			

Average Wholesale Prices.—Plants in Pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5	0 to 12	0	Fuchsias	3 0 to 4 0
Araucaria, doz.	12	0	30 0	Geraniums, scarlet, doz.	0 0 4 0
Aspidistra, doz.	18	0	36 0	„ pink, doz.	0 0 4 0
Campanula, pyramid, doz.	10	0	12 0	„ King of Denmark, doz.	0 0 4 0
„ isophylla	4	0	6 0	Hydrangea panicula, doz.	18 0 24 0
Crotons, doz.	18	0	30 0	Hydrangeas, white, pink	9 0 0 0
Dracæna, var., doz. ...	12	0	30 0	Lycopodiums, doz. ...	3 0 4 0
Dracæna, viridis, doz. ...	9	0	18 0	Marguerite Daisy, doz....	3 0 4 0
Ferns, var., doz.	4	0	18 0	Mignonette, doz.	6 0 0 0
Ferns, small, 100	10	0	16 0	Myrtles, doz.	6 0 9 0
Ficus elastica, doz. ...	9	0	12 0	Palms, in var., doz. ...	15 0 30 0
Foliage plants, var., each	1	0	5 0	„ specimens	21 0 63 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1	0 to 2	0	Marguerites, white, doz.	
Carnations, 12 blooms ...	0	6	0	bunches	1 0 to 2 0
Cattleyas, doz....	15	0	18	„ yellow, doz. bnchs.	0 6 1 0
Eucharis, doz....	3	0	4	Odontoglossums	3 0 4 0
Gardenias, doz.	1	6	2 0	Roses, Niphetos, white,	
Geranium, scarlet, doz.				doz.	1 0 0 0
bunches	3	0	0 0	„ pink, doz.	1 0 0 0
Gladioli, doz. bnchs. ...	4	0	6	„ yellow, doz. (Perles)...	1 0 1 6
Gypsophila, doz. bnchs.	2	0	0	„ red, doz.	0 6 1 0
Lilium lancifolium album	0	9	1	Smilax, bunch	1 0 2 0
„ rubrum	1	0	1	Stephanotis, doz.	2 0 2 6
„ longiflorum	1	6	2	Stock, white, doz. bnchs.	2 6 3 0
Lily of the Valley, 12 bnchs	12	0	18	Sweet Peas, white, doz.	
Maidenhair Fern, dozen				bunches	2 0 0 0
bnchs.	2	0	3	„ coloured, doz. bnchs.	2 0 0 0
Mignonette, English, doz.	0	9	1	Tuberose, gross	1 6 0 0



The Future of the "R.A.S."

AFTER the remarks which were published not long ago in this column on the above subject, it is not surprising to find such a high authority as Mr. Martin J. Sutton writing in such strong condemnation of the proposed permanent settlement at Ealing. His arguments are almost unanswerable, and we are in complete agreement with his remarks, that the great bulk of members of the society are so strongly against the policy of the council, that persistence in it will lead to a very serious diminution in the membership roll. No one can have read the reports of council meetings, with the lists of new members elected, without noticing the powerful effect of the locality of each year's show in keeping up the roll of members. A close examination shows that 40 per cent. of the new members in each year reside within a moderate radius of the site of the show. The society is evidently committed to the purchase of the land at Ealing, but as Mr. Sutton urges, this might be a good investment. To spend £30,000 more in laying out the ground and in buildings is a much more serious matter, and may, if the support of many members be withdrawn, involve the society in utter ruin. It is against such a casting away of the boats that Mr. Sutton pleads most strongly, and it is time that the general mass of members bestirred itself in supporting him before it is too late.

Rural "Economy."

Such is the name given to the course of instruction which has been instituted by the City of Edinburgh for the past two years, at a cost of £600 per annum. We are constantly being told that our methods are behind those of other countries, and that what agriculture wants is more science. Well, here is the cost of the "Rural Economy" classes for the last session:—

10 students, Agricultural Chemistry	...	...	£280
4 " Veterinary Hygiene...	...	...	75
3 " Agricultural Botany...	...	...	50
4 " Forestry	...	...	100

Besides this, the Highland Society made a grant of £50 to the forestry class, so that altogether the cost per student in this subject was £37 10s. £650 were expended in the tuition of twenty-one pupils. This is "rural economy" as practised by a "city corporation." There is either great waste of money or a great lack of appreciation of the opportunities offered. It would almost appear that even in Scotland the farmer, or would-be farmer, looks upon scientific knowledge as superfluous. Are there any other means of inducing a greater thirst for knowledge? What would be the effect if a few great landlords were to insist on an agricultural degree, or similar qualification, in rural science before admitting new tenants? What a howl there would be!

Fattening Poultry.

Farmyards are now teeming with chickens in every state of development, and a thinning out process will ere long have to be commenced. The demands on the corn supply will latterly have been very great, but on arable farms will shortly be relieved by the advent of the new grain into the stackyard. Country markets will for the next few months be glutted with young fowls, fairly well grown, perhaps, but practically unfed. Not one-fifth of the poultry which is brought into many markets is really fit for the table. The birds run about the yards and fields picking up a living where they can, assisted perhaps by a small allowance of poor grain thrown from the granary door in the morning. The evening before market day the perches are looked over, and a few of the least attenuated chosen for disposal next day. The hucksters, who are the chief buyers, naturally have not to look far for reasons for offering a low price, knowing that they will have to put the birds up and fatten them before they can profitably dispose of them. Thus the farmer's wife often receives but

2s. 9d. or 3s. per couple for the skeletons, which after three weeks fattening the poulterer sells dressed at 3s. each.

There is no doubt that artificial fattening is the only way to get the quality of market fowls improved up to the standard of the Sussex and Surrey fowls, though we do not believe that cramming is so absolutely necessary, although the use of a machine makes the process easier and more certain. The crucial point seems to be the food used in fattening. Sussex ground oats—a meal not entirely composed of the oat, but a mixture of that and other cereals—is by many considered to be the only food which produces entirely satisfactory results, and there is no doubt that the large quantity of it that is used is a proof of its excellent qualities. Mr. H. A. Cathcart, who recently managed the poultry at Birdsall, Lord Middleton's place in Yorkshire, in an article in the Royal Agricultural Society's Journal, tells us that he concocted a feeding mixture of sharps, oatmeal, barleymeal, and very finely chopped hay, containing only soft and young grass. "The hay," he thought, "would act in a similar way to the husk of cereals, but would be more easily digested by the fowls, and contain more nourishment. In mixing, the hay was first steamed for about twelve hours, so that it was quite soft when mixed with the meal. This mixture seemed to be much appreciated by the fowls, and was very much cheaper than Sussex ground oats. As Mr. Cathcart was very successful in his fattening, it is also important to note that he used no milk other than fresh, and strictly tabooed the sour milk, so strongly recommended in many quarters. He also warns poultry feeders against overcramming, especially during the first few days. It is flesh that is required, not internal fat; and the bird must have sufficient time given it wherein to lay on this flesh. The general conclusion we come to is, that a bird may be kept in confinement and fed on flesh-forming foods naturally administered for three or four weeks, and the cramming process with more fat-forming food reserved for the last ten or twelve days.

Work on the Home Farm.

Last week we had received sufficient rain for present needs, but no more. Since then we have had two really good and copious rains, and everything is satisfied. Even the Potato ridges must have been fairly soaked, and will require no more moisture at present. Despondent spirits are already prophesying a wet harvest. Fortunately, they know little about it, and the weather is e'en now giving them the lie by settling quietly down again, as if for another hot spell. As usual, when harvest is near the rain has had a ripening effect on the Barley, and must have done an immense amount of good to the quality of it. The sight of a laid patch is so rare that it must be a fine time for the self-binders. Though not on the heavy side, the Barleys about here seem to have hit a very happy, and what should be a profitable medium, if we should be fortunate enough to harvest them well.

Much less has been heard as to the diamond-backs, and the visitation is certainly much slighter than that of 1891. Accounts of the Turnips are generally much brighter, and we hope our original forecast may be correct at last. At any rate, they have all come quickly enough to the hoe, and there should be no belated work amongst Turnips during harvest time.

We cannot say the same about Mangold, for one or two of our neighbours are busy striking out now the plants which did not germinate until the midsummer rains. The work is being done with 6-inch hoes to leave them fairly thick, for they have not time now to get very large, and three small ones must try to get as big as two large ones. The second singling and weeding will be rather troublesome, for it must be done before the harvest is in.

The horses have not had much midsummer rest, but it has been possible to turn away the three-year-olds. What with skerrying and coal leading there is regular work for all those which are still up. Coal prices are held up too high by the merchants to encourage farmers to lay in large stocks, and the general coal carting, so much in evidence in most years, has this season been hardly noticeable.

Lambs have been left with their dams longer than usual, but have now been separated, the ewes being removed to a distance and to a very bare pasture, a thing not difficult to provide. The lambs will have to remain on the old pastures for some time, there being no change of food available yet.

Canada's Crops.—Reports received at Winnipeg from all parts of Manitoba and the Territories indicate that the crops in those parts average 40 to 50 bushels of Wheat per acre in many localities. Mr. Cassell, the warehouse commissioner, estimates the total yield at 60,000,000 bushels. Mr. M'Innis, assistant traffic manager of the Canadian Pacific Railway, places it at 55,000,000 bushels, while Mr. T. F. Bready, a grain dealer, who is regarded as an authority, puts it up to 65,000,000. It has been a wonderfully good season for the West. There are 40,000 farmers now in the West, and it will take at least 25,000 harvest labourers to gather the crop, which is heavy and thick, and at least 8,000,000 lbs. of binder twine will be required.

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Journal of Horticulture.

THURSDAY, AUGUST 15, 1901.

Vitality of Seeds.



A CONSIDERABLE amount of information has been recorded from time to time regarding the vitality of seeds, and more especially pertaining to those that have been buried in the ground for untold years, and yet preserved their germinating powers. Considering that this phenomenon is still comparatively little understood by scientists, it is small wonder that many persons are yet sceptical as to the power of certain seeds preserving their vitality under such abnormal conditions. Incontestable proofs, however, have been adduced in favour of the unlimited existence of certain kinds of seeds deeply buried in the earth, whilst comparatively little is known of the physiological nature of those seeds necessary for their preservation.

One of the most remarkable instances which had ever come under my own cognisance, of what may be called the spontaneous production of plants, under the circumstances indicated, was that of an immense number of Furze and the common indigenous Broom, on the deep and sloping escarpment of a large gravel pit in the Chad Valley, on the Calthorpe estate, Edgbaston, opened up upwards of twenty years ago, being several hundred yards in length, and the wide base of which is now occupied by villa residences, with gardens at back, whilst the deep bank of the gravel pit, fenced in from the high road above, and thickly covered with Gorse or Furze and Broom bushes, affords, especially when in flower, a picturesque and charming bit of landscape to the buildings in front, and it has been enhanced by the addition of winding walks to the summit of the slope, with here and there a rustic arbour disposed about the base. Prior to the excavation of the gravel the surface of the area was pasture land, and I am informed that neither Furze or Broom had been known to exist naturally in the neighbourhood. About four years ago, when the gravel pit in question was finished excavating from, a new pit was begun on the opposite side

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of the valley, about 400 yards distant, and with a similar result as to the appearance of at least several plants of Broom, but, as yet, no Furze. Possibly sufficient time has not elapsed for the germination of the seeds amongst the débris and soil excavated; possibly, however, Furze may not have grown on that side of the valley previously.

In addition to the foregoing examples, I have taken the trouble to collate several other instances regarding this interesting subject from various sources, and trust I shall not be accused of plagiarism if I quote one or two instances gleaned from the gardening press, and which may prove interesting to the readers of the Journal. The tradition of the mummy Wheat, however, has long become everybody's story; but the assertion that mummy Wheat has germinated after many centuries has not been substantiated. It is said that it is the common practice of the Arabs to sell fresh Wheat rolled in Nile mud to give it the same mouse colour of true mummy Wheat. This, of course, readily grows. Seeds which are rich in oil do not retain their vitality so long as those rich in starch; hence those of the Brassica family, which are rich in oil, do not survive so long as cereals, but the latter are said to lose their vitality after ten years at most, according to modern experiments. Those of leguminous plants may, however, survive after several decennia. The late Mr. George Bond, when head gardener to the Earl of Powis at Walcot Park, in Shropshire, stated that when at Kew Gardens as artist there, he was given some seeds of a Pea, and having kept them in an envelope for nearly half a century in an apparently fresh condition, promised to sow them and report the result, but I could never learn that he did so.

The power of different species of seeds preserving their vitality is very variable; some have been known to retain their germinating powers for many years, in any part of the world, and almost under any circumstances. In Lindley's "Introduction to Botany" it is stated that "Melon seeds have been known to grow when forty-one years old, Maize thirty years, Rye forty years, the Sensitive Plant sixty years, and Kidney Beans 100 years. Clover will come up from soil newly brought to the surface of the earth, in places in which no Clover had been previously known to grow in the memory of man, and I have at this moment three plants of Raspberries before me which have been taken from the stomach of a man, whose skeleton was found 30 feet below the surface of the earth, at the bottom of a barrow which was opened near Dorchester. He had been buried with some coins of the Emperor Hadrian, and it is therefore probable that the seeds were sixteen or seventeen hundred years old."

One of the most curious instances is the case of the London Rocket (*Sisymbrium Irio*). It appeared abundantly in London after the great fire, and then disappeared, and was said to be the only plant the seed of which survived that ordeal. A few years ago the writer, when on a visit to the Botanic Garden at Oxford, was shown a small plot of the London Rocket, preserved as a memento of that dire event. The London Rocket is said to still exist at Berwick-on-Tweed, where it is found on some rubbish heaps. Rubbish had constantly been carted on to the different fields around, but the Rocket never appeared in them; but in 1847 a large quantity of earth was taken from one of the fields, where the Irio was never known to grow, and used to make the embankment on which the station of the North British Railway partly stands. The Irio grew up in front of the bank in great profusion immediately. It did not remain many years in that particular spot, but it is reported that it still at times appears on other parts of the railway embankment, otherwise it is quite confined to the rubbish heaps. See Johnston's "Botany of the Earlier Empire."

The writer has a distinct recollection of a statement in a contemporary about a quarter of a century ago, to the effect that amongst the celebrated Oaks at Apethorpe in Northamptonshire, where one of them was blown down by a strong wind, a most singular circumstance occurred. A single plant of *Cynoglossum montanum*—a plant which did not previously appear in the neighbourhood—came up amongst the decayed fragments of wood. Many seedlings from this were produced the following year, but it soon vanished altogether. Another instance of the prolonged vitality of seeds was that in which an old

Rhododendron bed produced a thick crop of Foxgloves after lying in dormancy for probably half a century. The peat was brought from the Mendip Hills, where the Foxgloves grow in abundance.

A somewhat similar circumstance occurred in connection with a Furze fox cover, and which was converted into pasture, a state it remained in for thirty years or more; it was then deeply cultivated, and the following season a crop of Furze sprung up over the whole field. Numerous other instances might be cited of a more or less similar character regarding the marvellous lengthened vitality of seeds, and it is a well-known fact that the common Coltsfoot (*Tussilago Farfara*, the only British species, and the existence of which indicates a clayey soil), frequently appears upon the sides of newly made railway cuttings, and which had not previously appeared in the locality; whilst also the well-known Charlock (*Sinapis arvensis*) has repeatedly been known to vegetate thickly after being buried below the surface of pastures for an indefinite long period of time.

I opine that in the foregoing instances sufficient evidence has been adduced to prove the fact that the seeds of some kinds of plants retain their vital powers for indefinite periods of time, provided the conditions are favourable, but what the exact conditions are has never been absolutely ascertained. Sufficient data, however, has been afforded to prove that the principal conditions are uniform temperature, moderate dryness, and exclusion of light. On the other hand, germination of seeds cannot take place without the combined action of water, heat, and atmospheric air (or at least oxygen). With regard to the non-presence of heat, it is on record that a field of Wheat buried under an avalanche for twenty-five years proceeded on its growth as soon as the snow had melted.

With regard to the comparative absence of atmospheric air, Potatoes below 3 feet do not vegetate, at 6 inches they grow quickest, and at 2 feet are retarded two or three months. The scepticism, however, which naturally obtains as to the alleged, or otherwise, wonderfully enduring vitality of certain kinds of seeds, may be extended, when it is also stated that it is on record, "a bulbous root found in the hand of a mummy, above 2000 years old, produced a plant." Any subsequent information of this wonderful long-incarcerated specimen of the vegetable kingdom has not been recorded in the annals of the old century.—WILLIAM GARDINER.

London and its One Tree.—When we plant trees in London, why should they almost always be Planes? This question was asked in our columns recently, and it was shown that both Aspens and the Ash in the isolated instances of their plantation have borne the long drought and the tremendous storm of a fortnight ago with exemplary fortitude, while the Planes are already strewing the ground with brown and yellow leaves. It is no use attempting to take a matter of this sort to the Office of Works, who will merely tell you that Planes have come and Planes must stay; so a "Westminster" representative betook himself to the shady foliage of Hyde Park, and, finding a foreman gardener busily "planting out" on the fringe of Park Lane, asked his opinion on the subject. He agreed that London ought to have more trees. He was inclined to contend that the Plane tree was *the* tree for squares and broad thoroughfares in our large cities. There is no better tree to endure the smoke and atmosphere of London; it has large deciduous leaves and a smooth, whitish bark, impervious to dirt. He pointed out this fact and referred to the splendid Planes in Berkeley Square and Russell Square, not to mention those on the Embankment, which had grown so fast it was necessary to thin them every year. "But why not the Ash, the English Sycamore, the Aspen, or the Poplar?" he was asked. "You have them all in the Park; why shouldn't they flourish, say, in Piccadilly?" He shook his head doubtfully, but said, "I'm not so sure that the Ash wouldn't. It's true the Ash prefers a loamy soil, but it will grow in almost any, and succeeds in situations too exposed for any other tree save the Plane. But the Aspen, though it grows quickly, would better stand the Scottish cities, and the English Sycamore is really the Greater Maple, though it's often confused with the Plane." One sorrowfully gathered that experts regard it as impossible to expect that the same species of tree will flourish in Kensington Gardens and in Holborn. And yet on the Conti—; but that is an old story.—("Westminster Gazette.")



Disa Veitchi.

Hybrids are usually more amenable to culture than species, and this fine Disa, which was first flowered just ten years ago by Messrs. Veitch, is no exception to the rule. It is a grand plant in every way, a good grower, and most beautiful when in flower. The spikes are a foot or so in height, and the large flowers have sepals of bright rosy carmine, the lip white with deep crimson spots. *D. racemosa* is one of the parents of *D. Veitchi*, the other being *D. grandiflora*, and the brilliance of the latter parent is combined with the ease of culture of the former in it.

The best place for it is near a door or ventilator where it is sure to get plenty of fresh air. The foliage must be lightly dewed over several times daily in hot weather. After the flowers are past look out for the young shoots starting, as this is the time when repotting should take place. No drying off is admissible at any time, but water must be given in accordance with the state of the growth and the weather. *D. Veitchi* may be freely propagated by means of the small offsets that are produced in autumn. These require great care at first, but when once started to root on their own account they grow away rapidly, and soon make flowering plants. Thrips are the worst insect enemy to Disas, and when allowed to make headway they soon disfigure the foliage and ruin the health of the plant.

The Week's Cultural Notes.

The grower of Epidendrums will be busy among his favourites now. Many of the pseudo-bulbous section will be sufficiently advanced in growth for repotting, as this ought always to take place, if possible, before the young roots issue from the base of the leads. They then rapidly establish themselves in the new compost. Those with tall, distichous-leaved stems, such as *E. Wallisi* and the hybrids nearly related to it, are not by any means constant in their habits, and one has to catch them just when they can; but not many will take any harm if the repotting is carefully done, and the plants looked after until re-established.

In their wants as to compost they nearly resemble the Old World Dendrobiums, the pseudo-bulbous division being treated similarly to the evergreen Dendrobies, while the small growers, like *E. Endresi* and others, do well in the small pans that the deciduous Dendrobies like. Any plants that from soured compost, over-watering, or other reasons have got into a very bad state at the roots, will be benefited by being shaken quite clear of the compost, and all dead roots cut clean away; then let the whole of the plant be thoroughly washed in tepid water, laid out on a moist shelf, and treated as advised for newly imported plants.

Specimens of the beautiful *E. bicornutum*, potted some time since in crocks, may now have a little moss placed around them. They must be kept in the hottest house, and frequently syringed with tepid water on hot days. *Dendrobium aureum* will in many cases have finished its growth by now, and the plant should be hung up in the full sun in a cool house to ripen. A few weeks in the open air will also be beneficial to them, but they must not be placed direct from the moist heat of the growing quarters, or the foliage will suffer. A few days in a cool light house will harden them sufficiently for the purpose.

Where the cool house species, such as *Lycastes*, *Odontoglossums*, *Masdevallias*, and *Maxillarias*, have been placed in frames, they should be allowed all the air possible consistent with a moist atmosphere. During the time the sun is shining on the frames the nets, or whatever is used for shading, should be very frequently moistened, this checking evaporation from the plants and materially lowering the temperature. When the shading is taken off the ground around should be damped to create a moist atmosphere.

Oncidium carthaginense.

I recently saw a plant or two of this pretty *Oncidium*, but could not help comparing them with the kind of plants we used to see and grow. Apparently it is little known outside of botanical gardens, but at its best it is a superb plant. I have had it with leaves 2 feet in length and proportionately broad, great thick fleshy spotted leaves, judging from which one would not consider the plant difficult to grow; yet it is seldom seen in anything like good form, and in an unhealthy or weak state it is not worth growing.

The plants I speak of were growing among a general collection, and I used to tie the spikes, some of them several yards in length, under the rafters loosely, allowing the ends to fall naturally about the other plants. It likes a large roomy pot, with plenty of rough compost of a nature not likely to run closely together, plenty of water while growing, and a light position. The atmosphere should be kept moist, but not continually so, an hour's drying in the middle of the day helping materially to strengthen and harden the foliage. I am not advocating dry treatment, but this is the kind of thing they get in their native habitats in the West Indies and Central America, where Orchid collectors say the *Oncidiums* are among the most lovely sights in Nature.

Lælio-Cattleya Dominiana.

It was singularly fortunate that this hybrid, perhaps the last, and certainly the finest of his raising, should have been named after the late Mr. J. Dominy, the man who has been not inaptly termed the pioneer of Orchid hybridising. It is a lovely plant, and since Mr. Dominy's, or rather Messrs. Veitch's, plant flowered some twenty years ago, it has been raised over and over again in collections. Naturally the hybrids have varied considerably, and perhaps the finest of all is that grand form *L.-C. Dominiana langleyense*, raised by that worthy successor to Mr. Dominy, Mr. John Seden. This has pale rosy sepals and petals, the former shaded with white, the latter with darker rose. The lip is broad and handsome, the centre of the deepest crimson purple, becoming lighter outwards, until the colour fades into the whitish frilled margin; there are also radiating lines of golden yellow

from the throat outwards. It is, in short, just the fine plant that one would expect from its parents—viz., *Lælia purpurata* and *Cattleya Dowiana*. Under cultivation the varieties of this hybrid have been found very tractable, so it will eventually be cheap and easily obtained.—H. R. R.

Weed Out.—Weed out varieties, weed out names. Nurserymen in particular should see to this, and eliminate from their stock whatever is inferior, or whatever varieties are too nearly like others. It is very seldom that new fruits are introduced which are superior to some of the old ones, and they should always be subject to inspection and report by a competent committee. There are some 3000 varieties of Apples propagated, but perhaps not more than a hundred that need be grown for all practical purposes, and in California, says an American contemporary, the list may be boiled down to fifteen or twenty.



DISA VEITCHI.

Lilies for Heavy Soils.

(Concluded from page 127.)

The scarlet Turk's Cap Lily (*Lilium chalcedonicum*) is a very old fashioned Lily, and does well in most soils if left undisturbed. As it rarely produces more than five or six flowers on a stem, it lasts a shorter time in bloom than some, and its habit of growth is less graceful, while the dying of the lower leaves before it blooms makes it a rather untidy member. Still, it has a vividness of colour which very few Lilies possess. The above five Lilies and their varieties may be said to be the five most easily grown on heavy soils, needing little more care at planting than other choice flowers, and in after years, less. But there are others more beautiful than some of the foregoing, which will thrive equally well if the necessary care be taken in consulting their varying tastes when planting.

Lilium elegans, or *Thunbergianum*, as it is often called, is a hardy and vigorous grower. There are many varieties of it, varying from 1 to 4 feet in height, and from pale yellow to the deepest blood red in colour. Some of the apricot coloured varieties are especially beautiful—namely *Wallacei*, *G. F. Wilson*, and *bicolor*. Though growing in almost any good garden soil, to do well they need a good deal of leaf mould mixed with the soil when it is heavy, and still better, peat, while, unlike some others, they need a fairly sunny situation. A very valuable Lily indeed for borders and permanent beds is *Lilium longiflorum*, the *L. l. japonicum giganteum*, or *robustum*, being the best variety for the purpose. A strong bulb will sometimes produce eight or ten white, trumpet-shaped flowers, 6 or 7 inches long. It has been blooming this summer in the Poplar tubs in front of the Royal Exchange, London, though the flowers have been of very moderate size.

Where the soil is very heavy a hole should be made, and filled up with a mixture consisting of about one-quarter soil, one-quarter rotted manure, and one-half leaf mould. If the soil is only moderately heavy a smaller proportion of leaf mould will suffice. This Lily comes up very early in the spring, and should have a few twigs stuck over it, as Lilies, and this one in particular, often sustain damage from spring frosts, from which they do not recover the whole season. It is deliciously scented, and the bulbs are inexpensive.

The Nankeen Lily, *Lilium excelsum*, or *testaceum*, is a vigorous grower, 4 to 6 feet high, resembling *Lilium candidum* in its form of growth and fragrance, the colour being apricot, with red anthers. It will thrive in any ordinary fertile soil of good depth, but to get it to perfection, at least on very heavy soils, plenty of leaf mould is necessary, some peat being very beneficial too. *Lilium umbellatum*, or *davuricum*, is a rather slender, dwarf-growing Lily, most of the varieties having orange red flowers spotted dark crimson. *Sappho* and *erectum* are two of the best varieties, and all are cheap. The name *umbellatum* is given to this Lily because all the flowers spring from one point at the top of the stem, forming an umbel, a method of growth which detracts somewhat from its gracefulness. Still it is a good Lily for the mixed border, flowering freely when once well established, and growing equally well in sun or partial shade, if there is food and moisture below.

The last Lily to be recommended is the Panther Lily, *Lilium pardalinum*, a very handsome Californian Lily, different varieties of it growing from 3 to 8 feet high. It must have a sheltered position, where it gets plenty of light and air without the direct rays of the mid-day sun. It thrives in a moist soil, which has been very deeply dug and well enriched with rotted manure and leaf mould, not unattainable conditions in most gardens. It is a very satisfactory Lily to grow, as, with a moderate catering for its wants, it does not dwindle as many Lilies do, many of the more delicate ones being rather short-lived in any soil, but soon gets established, and increases. The best varieties are *Robinsoni*, 7 feet high, with plenty of foliage, and vermilion flowers shading to yellow, and *Bourgali*, 6 feet, bright crimson shading to yellow, both being freely spotted.

The above list by no means exhausts the number of those the special Lily lover succeeds in growing on a heavy soil, but contains all those which are fairly easily grown. Lilies need loving care without coddling. Though moisture-loving, none of those mentioned will endure being waterlogged, and none of them will do much in a very dry position. To mitigate the effects of the winter rains, it is well, when planting, to surround the bulbs with coarse sand, which also helps to keep off certain undesirable grubs, whose fleshy bodies do not like the grit. Lilies often suffer a great deal in a prolonged drought, both as regards their flowering and their preparations for next season's growth, and there is a risk in watering them of the water running in between the scales of the bulbs, and so predisposing to decay. A mulching of manure in the late spring or early summer is very helpful, but the water should be poured into a hole, or small flower pot sunk in the ground, a few inches away from the bulbs. Liquid manure thus given is very beneficial, producing stiffer and larger blooms, and increasing the vigour of the growth the following season.—A. PETTS.

Hibbertia perfoliata.

THIS most interesting plant usually flowers during April, but unfortunately it is not nearly so largely grown as it ought to be, for it is of unquestioned beauty. This may account for the fact that "F. J. R." has not hitherto met with the plant in the course of his wanderings. The Hypericum-like flowers are bright yellow, and being freely produced render the plant very attractive. Several species of Hibbertias are grown in conservatories, usually trained to pillars or the roof, but *H. perfoliata* is more compact in habit, and, like the smaller-flowered *H. Reedi*, is better suited for culture in pots. The flowers are not of long duration, but so many are produced, and in such close succession, that the plant continues ornamental for a considerable time.

Flowers and Shrubs for Poor Soil.

WE cannot but admire how Nature, with ever-bountiful hand, clothes the most unpromising spots in green or flowery garb. Travelling along any railway line we see proof of this as the train rushes through cuttings and over embankments, where the soil is often poor, yet covered by a varied and mostly thriving vegetation. Beautiful and numerous, too, are the plants scattered over some heaths or commons, where the soil seems barren indeed, and just affording hold for the plants, which chiefly subsist upon the moisture they get in the form of rain or dew. The last two months have been somewhat trying for the vegetation of waste places, but it is wonderful how long some plants struggle on with short supplies of nourishment, and even when they have died down to the crowns or roots, as just now, supposing they are perennials, autumn rains will make them spring up again. It is on chalk or sand that a drought has most effect upon plants, and they suffer least where the soil is clay or peat.

There are many extensive gardens in various parts of our island where the natural soil is mostly barren or poor, and for the general purposes of culture this has to be improved by manures. But often portions of such grounds are allowed to remain in their natural state so far as the soil, and it is necessary to choose plants and shrubs for slopes or hollows which will flourish in unpromising conditions. It is not difficult to find species that will make a good show during an average season on poor land, but dry weather comes hard upon some of them, just now for instance, unless there are facilities for watering them occasionally. About the southern counties people have frequently planted upon the sand some of those aromatic plants that thrive upon it, then, if strolling near on a summer's day or night, they can be refreshed by the perfume diffused from the clumps and rows. Centuries before, even on the London clay, the citizens managed to have herb gardens along the suburban hills of Middlesex or Surrey.

At the head of all aromatic shrubs suitable for sandy soils we may place the old favourites, Rosemary and Lavender. The first, though it seems in its after years of history, like many more plants, to have been linked with the Virgin Mary, took its ancient name from the dew that sparkled near the ocean, upon the margin of which it often grew. Rosemary, a plant that by its progress or decay, was thought to foretell its owner's condition, prosperous or adverse; it was also an emblem of remembrance, while if held in the hand it had the reputation of strengthening the head and heart. An admirer of Rosemary commends its "inexhaustible sweetness," and its "incomparable incense;" it has, too, the excellence of opening the bloom during March in favourable situations. Loudon advised that plants should be raised from seed, but usually Rosemary is propagated by cuttings planted in spring on a shady border. At one time it was a common plan to give the bushes a fan shape, especially the striped varieties, which we do not often see now.

Equal to Rosemary in enduring fragrance, and like it able to sustain a drought, Lavender is a good plant for warm sand, and from it a crop may be obtained that pays well. Cuttings made in early summer, placed when rooted in nursery lines, are ready for removal in the September or October of the next year. Layering does not produce such well formed plants as are got from cuttings. A Lavender hedge is a pretty sight, and it is handy for cropping, but after the third year the bush deteriorates. It is best to harvest your Lavender, says a grower, when a good number of the flowers in the spike are open, yet none of those on the top. Scattered bushes may be allowed to attain old age, for if they show little bloom on them, still they have a pictorial value. Amongst the Lavender upon some Sussex slopes we may see the humble but pretty Lavender Cotton (*Santolina chamaecyparissus*).

With these plants may be associated other aromatic species, which have, many of them, whitish or bluish-grey foliage, and are adapted to poor ground. There is the family of the Wormwoods, not pleasantly

named, but it was given because some of the better species were used as a vermifuge. One of them that adorns sandy slopes of south England is our old favourite the Southernwood or Suttwood, also "Old Man," and, what seems strange, "Lad's Love." It makes a dense bush 2 feet high, and with it are sometimes grown smaller species, such as *Artemisia nana* and *sericea*. We may have, too, the evergreen Hyssop, producing blue flowers from July to September that greatly charm the humble bees, and one or other of the Catmints, such as the hoary foliaged and pretty *Nepeta Mussoni*. Upon some banks Sage can flourish as an under shrub, a healthful plant by old repute, and even supposed to be a flower of Paradise; and Marjoram, of some variety that likes a dry soil; the Thymes, too, may succeed in sheltered spots.

Of course there are poor soils where scarcely anything will grow unless the land is manured, but the poorest may be much improved by deep stirring or trenching. Hardy Heaths will grow where other plants are starved out, and many handsome kinds are placed in masses with good effect, also they may be set in long drifts, having fine grasses interspersed. Miss Jekyll, in her "Home and Garden," states her method of enriching the sandy soil of Hampshire, as follows:—"The system I find to work admirably is to open a trench nearly 3 feet wide and deep, laying aside the top spit, and some of the sand close at hand, and wheeling most of it from below right away. Two-thirds of the depth is then filled with vegetable refuse from the rubbish heap, or with green waste from any part of the garden. We are careful to separate our waste products, burning only that which is absolutely dry, and rotten woody material that would breed fungus. If this stuff is already more than half-decayed we fill it in higher, but if still rather green it is rammed down, mixing in some of the sand. The top soil is then returned to the surface and the next trench opened."

The Broom and Gorse tribes are easily grown on light or poor soils; that ornament of many heaths and wastes, *Cytisus scoparius* may have a place in the sandy garden, and be accompanied by the white Portugal Broom, *C. albus*, and the pale yellow *C. præcox*, with here and there a specimen of the reddish variety of the common Broom, *C. Andreana*, interspersed, or other plants having dark flowers. Very compact and elegant is the Spanish Gorse (*Ulex hispanicus*), full of bright bloom during early summer. Several Andromedas, such as the diminutive, waxy-flowered *A. fastigiata*, like sandy ground, but they cannot do without moisture. There are some dwarf Rhododendrons, and even Azaleas; they may be planted in poor soil, not much exposed, though, as Tennyson says in "Amphion," they'll be unhappy. Two North American thornless Brambles are very suitable, *Rubus spectabilis* and *R. nutkanus*; the latter is tall, but not at its best till late in summer. That flower of cottage gardens, the Tea Tree (*Lycium europæum*) is a shrub of the sand, so too the handsome *Corchorus japonicus*. It is of no use to plant Roses, except it be one of our wildings, and even they prefer chalk or clay. But should the soil have been somewhat enriched, we might have Burnets and Scotch Briers.

Sea Hollies are plants to which sandy ground is congenial, and they may become the ornaments of unpromising slopes or ridges. Given plenty of space, and the so-called Silver Thistle, with blue flowers (*Eryngium giganteum*), a biennial that will sow itself if allowed

sufficient space. Then there is available the dwarf coast species, *E. maritimum*, the tall perennial, *E. Oliverianum*, also the Mexican *E. bromeliæfolium*, having Yucca-like leaves with large teeth and white flowers. We may find an *Acanthus* that will thrive in any sort of soil, such as the Armed Bear's Breech, *A. spinosissimus*, which throws up a showy spike late in summer, having pinkish flowers and leaves deeply cut, leathery, much spine'. Again, we have exotic Thistles available that care not how dry the soil is; tall *Onopordons* that will make their eight or ten, and our native and familiar Milk Thistle (*Silybum Marianum*) makes a good show with both flowers and leaves, when grown in clumps, but needs more moisture than other

Thistles. The North American thornless Bramble, *Rubus spectabilis*, flourishes on poor soil, and is handsome during the early autumn.

Stoebea purpurea has prickly, silvery foliage, and might be more frequently grown up in the sand; it rather resembles the Thistle tribe, but excels them in its flower, which expands like a large Daisy, and is white tinged with purple, the stems being 3 feet high, their leaves a contrast to the radical leaves, waved and scalloped. Good for rough ground is the Jerusalem Sage, *Phlomis fruticosa*, a curious species; the leaves certainly resemble those of Sage, but they are white, and adorned with a woolly coating that is like velvet to the touch; on the stem it is loose and browner. This shrub attains to the height of 5 feet, and spreads when old in a picturesque style. We may have, too, the Asphodel of the Mediterranean, *A. ramosus*, a striking plant, exhibiting sword-shaped leaves and dense clusters of white flowers; or the smaller yellow kind, *A. luteus*, which has fragrant bloom, the numerous leaves being awl-shaped and furrowed. Several giant Grass from Japan, of the genus *Eulalia*, speedily become strong and showy plants, harmonising with a varied assortment of flowering shrubs.

When visiting the southern counties of England we may notice many gardens that exemplify the suitability of the hardier species of *Cistus* for a poor soil. Here and there we may discover a *Cistus* garden, a circular area or a space on the side of a hill being specially devoted to these shrubs. Some of the species will not stand a very hard winter, it is true, but such as do attain old age become charming objects. An unavoidable defect the *Cistus* certainly

has, the flowers are so fugacious, and oftentimes a host that expanded in the morning have fallen before evening. There are two fine species which have deep green foliage in summer, turning to bluish grey in winter; one of these is *C. laurifolius*, rather a rapid grower, reaching the height of 7 feet sometimes. Its large white flowers greet June with a delightful fragrance. The other is the Gum *Cistus*, *C. ladaniferus*, a little tender, willow-like in its growth, and beautiful; the broad blossoms are blotched with purple. *C. florentinus* is a hardy species of smaller size, the leaves reddish bronze in summer, and it has a long succession of flowers. Then *C. populifolius* and *C. cordifolius*, having lighter foliage, will stand well almost any winter. Allied to the preceding are species of *Helianthemum* of lower growth, also well suited for poor soil and plenty of sun. Several have yellow flowers, others have various tints, red, pink, or creamy white, and there are double varieties. A handsome dwarf bush is *H. rosmarinifolium*, narrow leaved, with many small flowers. *H. formosum* also blooms profusely, and makes a show on a sloping bank.—J. R. S. C.



HIBBERTIA PERFOLIATA.



Zephyranthes candida.—As an edging to narrow borders, this dwarf bulbous plant is frequently employed. The flowers are white, as the specific name indicates; and of the Zephyr flowers it is perhaps the best known, and the finest. The pretty Amaryllidaceous flowers appear in September, on stalks 9 inches long, but they are scentless. It receives the common appellation of Swamp Lily in its native habitat by the marshes of La Plata, and under cultivation a soil with moist bottom is preferable.

The Yellow Flax (*Linum flavum*).—The golden or yellow-blossomed Flax is a rich shrubby perennial, easily raised from seeds, and just now forming glowing masses of yellow flowers in the sunshine. It is very handsome on rock borders or stone edgings, but may be grown almost everywhere in the garden. A white-flowered species (*L. monogynum*) from New Zealand is of similar but more slender habit, with grey leaves, and makes a good and free-blooming companion for the yellow kind, both lasting in flower for a long time.

Flowers in Season.—*Pentstemon barbatus* cannot be excelled amongst crimson flowered plants possessed of graceful mien, nor from amongst blues could one choose a finer subject than *Salvia virgata*. The latter forms dense massive bushes, and yearly throws up long showy spikes of flowers that have a markedly fine effect in borders. The *Verbascums* and *Oenotheras* furnish some good yellow-flowered subjects. The *Verbascums* are, however, almost past, though *V. nigrum*, dwarfer than most of them, and *V. Lychnites*, a distinctly good sort, are still in fairly good condition. *V. Chaixi* and *V. phlomoides*, besides the common *Mullein*, are all worthy of notice. The dry weather has had a very marked effect on them, however, and not at any time this year have they been at their fullest beauty. *Lathyrus latifolius* and *L. rotundifolius*, together with a few notable *Veronicas*, furnish other valuable plant flowers at this season.

***Rhododendron balsaminæflorum*.**—It was a great day for the hybridiser when he first saw the Balsam-flowered intermediate house *Rhododendron* expand. The Chelsea nursery of the Veitchian firm have been quite alone in introducing this remarkably handsome section of the genus, and annually we are delighted to find improved varieties of great distinctiveness being brought forward. Happily this warm greenhouse or intermediate house species and varieties are becoming more fully understood and their needs catered for by cultivators. The *Journal of Horticulture* furnished cultural data on March 7th, 1901. As this section of *Rhododendron* flowers the whole year round, the man who can grow these well need never be without a few trusses of beautifully coloured and sweetly perfumed flowers of very superior and rare qualities. "The *balsaminæflorum* section contains only five varieties, all double. They must not be confused with the hardy *R. indicum balsaminæflorum*." The section was first derived from a somewhat malformed semi-double flower whose stamens had become somewhat petaloid. Seed was saved from the capsule, and nearly every one of the fifteen seedlings that eventually reached the flowering stage had double flowers.

Two Beautiful Native Weeds.—These are the Viper's Bugloss (*Echium vulgare*) and the common Chicory (*Chicorium intybus*), both now very handsome, bearing their tall and slender spires thick set with blue flowers. They are both easily reared or established on dry grassy banks or on natural rocky declivities in the sunshine, by sowing their seeds as soon as they are ripe. Our plan is to mix the ripe seeds thoroughly well in a wheelbarrowload of finely sifted soil, and then scatter the whole in cracks and chinks, or crevices where it is desired that they should grow. No soil seems too dry and barren or too hot and sandy for these plants, as they belong to vigorous habited groups of our native weeds, so-called, that become more bright and flowery the more they are sun-scorched or starved into beauty. A writer to "The Field" says that he once saw a patch of seashore covered with these two plants, with the Great Horned Poppy (*Glaucium luteum*) and the Sea Holly (*Eryngium maritimum*) growing amongst them, and the effect was very lovely, being varied here and there by little grassy knolls or hummocky banks of the common wild Thyme, which, like the Viper's Bugloss, is beloved of the bees.

A Handsome Turkey Oak.—Lady Churston, writing to the "Field," states that at Lupton, near Churston, in Devon, there is a very beautiful example of this tree, the lower branches of which sweep to the ground, and the umbrage of the tree is 130 yards in circumference. Its trunk has a girth of 15 feet, and the total height of the tree is 90 feet to 95 feet. There may be larger and taller trees of this kind in Great Britain or Ireland, and trees containing more timber from the woodman's point of view, but we are sure many proprietors and tree lovers would like to pride themselves on such an object of beauty in their grounds.

Currants.—Currants were formerly small Grapes grown near Corinth, hence their name. The fruit is easily grown in the northern parts of Great Britain. The White and Red Currants contain similar properties. They contain malic and citric acid. The jelly made from them is excellent in fevers. The fruit relieves constipation, says Mr. Broadbent, and purifies the blood. The Black Currant is deservedly prized for its usefulness in colds. It is laxative and cooling. The jelly has long been used for quinsy and sore throat. It should not be made with too much sugar, or its medicinal properties will be impaired. A teaspoonful two or three times a day may be given with advantage to children with thrush.

Borage: a "Homely" Plant.—I say "homely," and this is passable, for Borage (*Borago officinalis*) is found somewhere in all gardens, whether it be a cottager's or that of a mighty lord. It has a modesty which causes it to bend its flowers downward and away from direct observation. Naturally we do not regard this in the light of a quality. When plucked and looked into, however, the blossoms are very attractive. The colour is of the deepest sky-blue with a dash of gentian, and the edges of the petals are exquisitely cut, sharp and keen, running acutely to a point. The black anthers, about a quarter of an inch long, form a circular guard around the stigma, and their bases are "wadded" round in a cushion of whiteness. Borage is largely cultivated for bee feeding. Insects probing for honey dislocate the stamens and receive a shower of pollen.

***Romneya Coulteri*.**—A large specimen of this showy Californian Poppy is flowering freely in the Berberis dell at Kew, and is one of the most striking of outdoor flowering plants. It has been in cultivation about twenty-five years, but until recently was but rarely seen. Like many other showy subjects from the same country, it is a little tender, and should not be planted in a cold situation. Even in a sheltered position a little protection is necessary in early spring; as growth commences early and young, soft shoots are liable to injury from late frosts. Both from a foliage and flowering point of view it is very striking, the leaves being glaucous and prettily divided, while the flowers are 5 to 6 inches across, with pure white petals, and a large mass of golden stamens. It succeeds in good loam, and in the southern counties does well in the open garden providing the necessary shelter is provided in spring. It is essentially herbaceous in character, though occasional examples are found that have made perennial stems.—W. D.

My Garden: "A Poor Thing, but Mine Own."—It borders the King's highway; a railing divides it from the asphalt pedestrian way. It consists of an oval bed of very moderate dimensions, situate in front of the cottage window, and its contents are the familiar Marguerites, attacked, alas! by the composite leaf-miner, and thereby disfigured. Around the Marguerites are Henry Jacoby Geraniums (or Pelargoniums, as the Editor will have one say), and forming an outermost border we have Golden Feather, and our old friend the dwarf blue Lobelia. It is a homely plot, indeed very homely, yet is the best and brightest "in our street,"—at least to me. But I have more than this, I have a little border that runs from the railing bordering the pavement, back to the wall of the house, and there—what? It stops. Yet here are Euonymuses, Carnations, Tobacco plants, Sweet Peas, Scabiosas, and a glorious specimen of the white Jasmine, that has grown and spread in tip-top style since two years ago, when I planted it as a mere slip. We have Gladioli galore just against the steps leading up to the front door, and I see the boldly climbing Tropæolums, with their gorgeous flowers are gradually hiding the handrail to right and left. A fortnight ago we furnished a Rose show, free for inspection (and appreciated) by everybody who passed. The Rose show consisted of one variety only, in the form of a really handsome wall specimen of *Rosa polyantha* White Pet. It covered the whole front of my neat little cottage home, and bears hundreds, or I might say thousands, of its pretty white flowers every summer. And so I might go on, but who would follow me? Yet it is such a dear little garden, all my own.—D.



Summer Pruning Fruit Trees.

I do not think sufficient emphasis is laid on the value of summer or early autumn pruning with the view of increasing the size and improving the quality of fruit. Under glass you remove the laterals and stop growths, as well as thin the bunches of Grapes, to secure fine berries and keep the growth in proportion. Outdoors, during the months of July and August, I shorten back exuberant and precocious growths of Apricots, Neectarines, Plums, and Pears on walls, and standard and dwarf Apples, Pears, and Plums in the open. In every instance where this is done the fruit is larger, of finer colour, and superior flavour, as compared with those not so treated, besides the advantage to the trees.—W. J. MURPHY, *Clonmel*.

A Problem in Heating.

In your issue of August 1st, under the above heading, a note appeared from Mr. H. Richards. Not having read this correspondence, I cannot criticise it, but I will just say my experience with dipped pipes under doorways and walks lasted eighteen years, and I never found the least obstruction to a quick and regular circulation. In this place a large conservatory and plant house were heated from one boiler, and those two houses contained nine dips under doorways and walks. Not alone; other houses adjoining had several dips, and the circulation in those houses was also in every way quite satisfactory. In confirmation of what Mr. R. says, I would certainly recommend a dip under a doorway or walk in preference to stepping or falling over obstructions where they ought not to be. Of course, no sensible man would think of putting in a dip where the boiler and pipes are nearly on a level, but, where circumstances admitted, I should not hesitate to put in dips. The main portion of the apparatus mentioned above has been erected about forty years, showing it to be no new idea. During my time there additions were made to the piping, also adding three more dips under walks.—J. EASTER, *Nostell Priory Gardens*.

Strawberries: Tried Sorts.

The past two months' tropical weather has been very trying for gardeners, most kinds of vegetation suffering severely from drought, and Strawberries—a most important crop—suffered considerably in this respect, especially on hot porous soils. I was unable to give any of my Strawberry plants water this year, but I mulched the rows rather thickly with long stable-stained straw quite early in the season, otherwise failure in maturing the crop would have been quite certain, for I could not have spared the labour or water to keep them in a healthy condition if mulched late, or when in bloom. St. Joseph commenced to ripen first, but it is very insipid as a dessert fruit. It is now (August 9th) commencing to throw up flower spikes again, so I may get an autumn crop of fruits.

King of the Earlies ripened its first fruits a few days later, but this variety grows very weak in this soil, and consequently is a poor fruiter, and I shall not grow it again. Royal Sovereign came next in the order of ripening, and its characteristics are the exact reverse; it is a prodigious cropper and excellent in flavour, and its strong dark foliage withstands drought and red spider well. Monarch is a splendid doer; its fruits are of good shape, size, and flavour, and withstood drought and spider to the last. On the other hand Veitch's Prolific, Dr. Hogg, and Lord Suffield suffered severely from this pest. The former of the trio was entirely unable to resist red spider, which commenced its ravages early in May. These three I shall also discard. Stevens' Wonder has excellent foliage and good sized fruits, and its flavour reminds me somewhat of that old favourite, Keen's Seedling; its fruits are too soft for packing, and I think this variety can be done without. Sir Joseph Paxton had a heavy crop, and its foliage suffered very much from red spider, and the fruits were not of the best flavour. Leader had an enormous crop of huge fruits of a sharp brisk flavour, and it appears to require a heavy soil, for it was the first to show signs of drought. Ganton Park withstood the dry, hot weather very well indeed, and its fruits are well protected by its foliage; the fruits were of many shapes, some being very handsome, and all of good flavour.

Scarlet Queen is a useful variety for preserving. Next comes my favourite, Veitch's Perfection. It does not grow very strong, but the fruits were of large size and nearly as dark as Waterloo; the flesh is firm, and of an exceedingly rich sweet flavour, and it should be grown by everybody. British Queen treated as an annual does very well. I can strongly recommend anyone who has previously failed to fruit this variety to try this method, but early propagation and planting must be carried out if a good crop is expected the following year. Waterloo did very well, its large handsome fruits being much

appreciated. The plants withstood the drought and red spider very well. Elton Pine was very good in this respect, but it cropped very poorly. Where this sort does well it is valuable for preserving and kitchen purposes. The soil in the quarters where the Strawberries were grown is very hot and porous.—A. JEFFERIES.

Fly on the Chrysanthemum.

When, a few days ago, I was walking round the nurseries of Messrs. Thos. Hewitt & Co., Ltd., at Solihull, where a very large number of Chrysanthemums are grown in pots for various purposes, I was informed by the foreman that the best remedy for the fly is the Abol insecticide, applied through the Abol syringe. The spray is produced from a single hole by an ingeniously arranged screw plug in the inside of the nozzle, and by screwing the plug slightly back or forward the spray produced can be regulated to various degrees of fineness, while if the plug be entirely removed a straight jet of considerable power is the result. An examination of the plants showed their clean character, and the Abol insecticide is now employed in preference to all others. It was said to be much more efficacious, and quicker in its action, than any other insecticide which had been tried. I hear that in places collections have become much affected by green fly, and a mention of this remedy may prove of use to some cultivators of the Chrysanthemum.—R. D.

The Auricula.

Although there does not seem to be much increase in the number of those who cultivate this flower, so much prized in former days (and this was one of my earliest loves in floriculture), yet it is valued by many who love their gardens; it does not lend itself to the æsthetic aspect of gardens, and it has to be cultivated in pots and grown in frames. My own interest in them has greatly diminished since I was obliged, on account of my failing eyesight, to part with my own collection, which I have cherished for many years, and now I hear that the clever gardener under whose charge they were placed has left the situation; and as in all changes one cannot tell whether things will be equally prized by the gardener who succeeds, I might have been anxious about my old favourites did I not know that the employer was herself very enthusiastic, and so will not fail to see that their culture is well cared for. I hear also that the fine collection lately owned by Miss Woodhead of Hipperholme, near Halifax, has found its way to the Royal Nurseries, Slough, and I suppose will soon be dispersed, for although Mr. Harry Turner delights in them, he cannot, as a business man, refuse to part with his most cherished plants if he receive a good offer for them.—D., *Deal*.

Vines.

Calling on a local grower of Grapes for market in the vicinity of this neighbourhood a few days ago, I could not but help commenting on the splendid crops the Vines were carrying; also the size, fine finish, and colour were in my opinion all that could be desired from a market grower's point of view, and when I add that Grapes of the variety Black Hamburgh have realised as much as 3s. 6d. per lb. in Covent Garden Market, readers will readily admit, judging by the returns home, not much the matter with them. But it is not so much with the crops they are carrying, good though they be, that induced me to send this note respecting them; it is more the extraordinary way in which the grower treats his Vines, at least so it always appears to me when on the different occasions I have visited him. I will now endeavour to explain my meaning in reference to the above statement. The Vines are planted in two span-roofed houses, each 150 feet in length by 12 feet wide, and were originally built some years ago for the growing of Cucumbers for market, and for such a purpose were, no doubt, highly adaptable, but the decline of the latter in price so disgusted the grower with his returns that he decided to give up their culture and utilise the structures by planting Grapes for the same purpose; a start was therefore made with Vines raised from eyes in the usual way, the brick pits being drained and filled with compost suitable for their reception. The rods were planted at a distance of 3 feet apart, trained up one side of the roof and down the other, while the apex of the rod is rooted in a similar bed on the other side; it will be noted, therefore, they are rooted both ends.

Again, another point was noted in respect of the main laterals; these were inarched on to one another, putting one very much in mind of trelliswork; certainly it appeared rather a novel way of treating them, the sub-laterals being kept rigidly pinched. I inquired the grower's reasons for the above treatment; the answer was that it prevented the waste of any superfluous energy on the part of the Vines, thus throwing their whole strength towards the bringing of the crop to maturity.

I noticed a young rod of Muscat of Alexandria carrying a crop of medium-sized bunches; this was planted at one end of a house, the main rod being carried along the top of the house on the extension system, sub-branches being taken alternately down each side of the roof, and I understood would have the apexes of the rods rooted in a similar manner to that already described.—GEO. HAGON.



Current Notes.

WITH healthy, free growing plants that are filling the pots with roots, there is but little difficulty in the watering, as, immediately the surface soil dries, a copious supply of water may be given to moisten the whole mass. It is otherwise with overpotted plants or those that have not yet fully occupied the space with roots. The supply of water must not be given so frequently, and though the surface may appear dry, on examination it may be seen that this is somewhat misleading, for the bulk of soil below retains ample moisture. The best criterion of such pots, as to the necessity for watering, is to sound them by a smart rap with the knuckles, when a dull, heavy sound will indicate that no water is required; a hollow ring that moisture is needed. The condition of the rooting power of various plants is soon seen by observing the pots for several days after a heavy down-pour of rain. Those plants with plenty of roots will dry up the quickest, while the others with few roots remain comparatively wet for some time. Let these dry out before applying water. Plants in very small pots, when once established in them, dry up very quickly, and water should be given on the least appearance of dryness.

The time has now arrived when liquid manure or sprinklings of artificial preparations are necessary and beneficial to sustain plants healthy and vigorous. These stimulants, however, must not be given when the soil in the pots is dry. It must be made moist first with clear water. The virtues in the stimulant are then retained for the benefit of the roots. Stimulants must not be given too freely at first. Once or twice a week will suffice, and then it should be in a weak condition. Liquid animal manure is, perhaps, as good as anything to begin with, of the colour and strength of pale ale. It should be given clear and not in a muddy state. A mixture of cow manure, horse and fowl dung, may be placed in a bag, tied securely, and sunk in a 30 gallon tank of water. A peck of manure will be sufficient for this amount of water. Stir frequently for a few days, then allow to settle, and the solution will be ready for use. Should it appear too strong dilute with water, as it is really best to give it weak rather than powerful so as to destroy roots. Changing the stimulants given is always good for Chrysanthemums, hence a tub of soot water should also be prepared in a similar manner. A peck of fresh pungent soot placed a bag in a 30-gallon tub of water will shortly make a beneficial manure. A little lime introduced to the water and stirred in is an admirable means of clearing it, so that it will appear like wine. This is very good for Chrysanthemums, and may be given alternately with other stimulants. A solution made of sheep manure may be occasionally applied, giving it weakly and not too frequently. In addition to these, light top-dressings of Clay's, Standen's, and other artificial mixtures can be used, watering in the dressing. At present, however, it is not desirable to gorge the soil with rich food, particularly during the time the buds are forming. After they have made a start in swelling is the best period to commence giving stimulants. The side shoots on the main stems ought to be gradually rubbed out on all the large flowering varieties, confining the energies of the plants to the production of principal blooms.

Dead leaves on the plants are good hiding places for earwigs, so allow none to remain. Weeds growing in the pots abstract food and moisture; therefore, while still comparatively small, pull them out. Securing the stems to the supports must be attended to, anticipating the rough winds which are sure to occur about this time and shortly. Do not tie too closely to the tops, as a little freedom given will prevent snapping and breaking of the stems.—E. D. S.

Love of Nature.—The garden around the late W. J. Stillman's cottage in the Surrey Pine woods was in itself a charming evidence of the affectionate remembrance in which he always held his native America. His endeavour was to have as many American trees, shrubs, and flowers as could be taught to grow in the English climate. His pet squirrels were to be fed on nuts from American trees, wild berry bushes from the States made a hedge along one side of the little domain, and in a little artificial pool in a hollow among the Pines was planted an American Water Lily. In fact there was no corner of the garden in which the loving work of acclimation did not go on.

Coniferæ.

ABIES PINSAPO, the Spanish Silver Fir, differs much from any of the Silver Firs already mentioned. The branches are not flat or frondose like many of the species, and the leaves, which are rather short, are stiff and prickly; they are thickly set all over the branches, which gives the tree a very dense appearance; the silvery bands on the under side of the leaves are very faint. The tree is quite hardy, and not fastidious as to soil or situation, but is said to be especially suitable for chalk land. Its stiff appearance may perhaps be somewhat against it, all the same it makes a beautiful specimen when young; at any rate, it is a model of symmetry. It is suitable for the lawn or pleasure grounds.

Thuia occidentalis is the common or American Arbor Vitæ, and is a well known evergreen shrub in this country. In its native habitat, however, it assumes the form and height of a tree; it thrives best in a moist situation, in dry soil it becomes thin and bare. For villa ornamentation it is excellently adapted, also for forming hedges and screens. There are several varieties, including a variegated and pendulous form. **Lutea** is a self-coloured variety, the whole of the foliage and young growth being of a bronzy yellow colour. The plant is less dense than the type. **Biota orientalis**, the Chinese Arbor Vitæ, is a fine free-growing species, and is present over the country in variety, and forms a fine tufty bush-looking plant; it is one of the commonest and most useful garden shrubs. Its habit is more dense, and the foliage of a brighter green than the common Arbor Vitæ. The only variety I am familiar with is **semper-aurescens**, which is a dwarf globose shrub. The foliage and terminal growth are of a deep golden hue; it has the advantage over many coloured forms by retaining its colour throughout the season.

Thuia gigantea and **Libocedrus decurrens**. There appears a great deal of confusion respecting these two trees. As far as my experience goes **Libocedrus decurrens** is quite different to **Thuia gigantea**, in a young state at any rate, but I think they are both often sold under the name of **Thuia gigantea**. They are both tall-growing trees, and were introduced in the same year, 1853; **Thuia gigantea**, by William Lobb, which was formerly known under the name of **Lobbi**, and **Libocedrus decurrens**, by John Jeffrey. The branches of the latter are more rigid and upright, and young trees are very dense; the bark on the branches is of reddish brown colour, and the leaves a beautiful bright green on both sides, they are strongly decurrent and much flattened. The bark of **Thuia gigantea** is more red, the leaves are darker green on the upper side, but a lighter green beneath, and are arranged more distinctly in opposite pairs. They are beautiful trees, and in their native country grow to a great height. Although they will thrive in a variety of soils, moist situations suit them best, and they are quite hardy. **Libocedrus decurrens** is known as the Californian White Cedar, also the Incense Cedar. The name has reference to the fragrance of the wood.

Cryptomeria japonica forms a noble and distinct tree where it grows well; it requires a sweet, moist soil, and a warm or sheltered locality, it then makes a handsome ornamental tree. It is quite hardy in this country, but there are not many places that can boast of good specimens. This is said to be due to climatal causes, the most potent being a less annual rainfall, and a lower average summer temperature, than in its native habitat, Japan. It is much thought of in that country, and is largely used, not only in gardens, but it is also planted to form avenues along the public roads. In this country the trees grow very well for a few years; they then very often lose their lower branches, and take on a sickly appearance. The trunk appears rather weak, and thus is liable to be injured by wind or snow. **Cryptomeria elegans** is somewhat harder, and more easily accommodated, I believe, than **C. japonica**, but my experience is with small trees only. The trunk is not so straight and tapering, the branches are shorter, and the general appearance of the tree is less formal than **japonica**. The foliage and young growth, which is bright green during the growing season, changes toward the end of the autumn to a reddish brown, which makes the plant an attractive object during the winter months.—PINUS.

Plant Cultivation in British Colonies.

Mr. R. Hedger-Wallace (formerly of the Department of Agriculture, Victoria, and the Government Horticultural College, Melbourne), recently delivered a course of ten lectures to the students and others connected with the Royal Botanic Society's Garden. The second of his series summarised the general conformation of the African continent, and the outstanding physical and climatic features of the British colonies of this great country, together with concise observations on what vegetable products our African colonies furnish. In his opening

remarks, Mr. Wallace said that if one was to draw an imaginary line across Africa, from the southern end of the Red Sea to the Gulf of Guinea, all the land north of such a line would be distinguished as very low lying, while east and southwards the land would be found to have an average height of about 4000 feet. The eastern coast is tilted up, as it were, while the north and west is low. The Nile, on this account, is a sluggish river, with a broad, wide-spreading delta. The flora is governed by the physical conditions; in the central part it is desert, in Morocco we find rich steppes, and from the Niger and inward there are thick forests. On the eastern side we find broad tracts of cultivated land. Mr. Wallace briefly enumerated five points as being of special importance if the best returns are desired from the land. 1, The maintaining the fertility of it; 2, Following the best methods of preparing the land; 3, Growing the most productive varieties; 4,

we get Cloves, Cotton, Indigo, Sugar-cane, and Rubber. In the Soudan Dates are grown, together with Maize and Ebony. A peculiarity of South Africa is its terrace-like conformation. Basutoland is one continuous plateau, and the Orange River Colony has an average elevation of between 3000 and 4000 feet. Zululand, to the north-east, on the other hand is a belt of low-lying subtropical country, much affected by warm moist currents, which blow in from Mozambique Channel. Natal has really two climates. On the shore the warm winds raise the temperature, while the highlands are cooled by cold currents from the Drakensberg Mountains. In the hot lowlands Indigo, Cotton, Bananas, and Sugar-cane are grown; while the highlands are rich in pasturage. The Transvaal may be partitioned into three different regions:—1, The uplands; 2, the low eastern zone; and 3, the bush-land, merging upon to dry steppes of Bechuanaland.



RHODODENDRON BALSAMINÆFLORUM. (See page 148.)

Judicious rotation; and 5, Using only the best in seeds and plants. The aim of the cultivator at home or abroad should be to improve the quality of the produce, while lessening the cost of production. Referring to the Nile basin, the lecturer spoke of this region as being the hottest of any in the Old World. Here are cultivated Rice, Maize, Barley, Sugar Cane, Doum Palm, Peas, Lentils, and general crops. There is also Tobacco, Myrrh, Senna, Gum Arabic, Indigo, Flax, Cotton, and plants yielding oils. Egypt grows Cotton, but not much Flax.

North Africa represents the warm-temperate, and subtropical zone, and produces Oranges, Linseed, Tobacco, and to some extent Sugar-cane, Cork Oak, and Esparto Grass. West Africa is a purely tropical zone, and furnishes the Ground Nut, Arrowroot, Yam, Cocoa, Banana, dye woods, Palm-kernels, Palm-oil, and Indiarubber. South Africa again is temperate, reaching upwards into the tropics. In the southern part of this great country all the European fruits and vegetables can be and are grown, plus, in suitable regions, the Guava, Tamarind, Banana, Hemp, Flax, Tea, and Coffee; while from British East Africa

No distinction can be made in Egypt between the spontaneous or indigenous flora of vegetation and what is cultivated, so long have the products been grown by the people of that land. Three crops are yearly taken from the ground. Linpines, Flax, and Clover are winter crops, sown in November, and harvested in April and May. The summer crops are sown between March and May, and reaped in November and December, while the "autumn" crops are sown in July, and are ready for gleaning in November. Rice, Sorghum, and Millet are the autumn staple; Cotton, Rice, Maize, and Indigo are grown for summer crops. Vines are almost entirely confined to the Fizzon. The ancient cultivation of the Lotus and Papyrus has now wholly disappeared. The culture of Date Palms and Mulberry trees occupy many of the people in Upper Egypt. Mr. Wallace in like manner enumerated the cultivated products of the Gold Coast, Sierra Leone, the Niger region, Gambia, Mauritius, Seychelles, Shire Highlands, and Rhodesia. He then described the cultural details, uses, and characteristics of the fruits and vegetables, and more or less detail.

NOTES

NOTICES

Messrs. Hogg & Robertson, seedsmen, Dublin, who are widely known in this country as having established with success the bulb growing industry at Rush, co. Dublin, and whose exhibits of Tulips, Daffodils, and other bulbous flowers have elicited much attention and admiration at the spring flower shows, have been honoured with the royal warrant of appointment of seedsmen to his Majesty the King.

French Rose Growers have a characteristic method of growing some of the climbing kinds. The plants are planted in the beds and a framework of Bamboo canes set behind them, so that the shoots are spread outward, almost fan-shaped. When the work is carefully done very little of the frame is visible. To those who have space, this system of growing some of the lovely climbing kinds, especially the yellow and copper-coloured sorts, may be recommended.

United Horticultural Benefit and Provident Society.—The usual monthly meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. C. H. Curtis in the chair. Eight new members were elected, and one nominated. The amount paid to sick members since the last meeting was £39 1s. The treasurer reported having £499 9s. 4d. in hand, and was instructed to invest £400 in the best available Corporation Stock. The secretary was asked to make the usual preliminary arrangements for the annual dinner, which will take place early in October.

The Royal Botanic Gardens.—All who are concerned for the preservation in its unrivalled beauty of one of the prettiest spots near the heart of London, will be glad to learn that the Royal Botanic Society's garden in Regent's Park has been secured to that body for a further term of thirty-one years, by lease granted by the Department of Woods and Forests. The announcement was made by the council at the annual meeting, over which Mr. C. B. Marlay presided, and it was confidently anticipated that with the building of the new club rooms, the extension of the scientific work, and the formation of the gardening school, the society had now better prospects before it than had been the case for many years.

Sudden Showers.—A cloudburst is one of those meteorological disturbances which arise under the same general conditions as wind squalls, thunder showers, and tornadoes. They come at a season when high temperature enables the atmosphere to carry in suspension a much larger quantity of water vapour than at other times; and although a large and widely scattered brood of local storms may be hatched out simultaneously, each particular member of the family is small and short lived. This is especially true of the cloudburst. Another characteristic of the latter is that it almost invariably occurs in a mountainous district. The accepted explanation of the phenomenon is this: A storm cloud, which otherwise might give rise to only a moderate shower, is forced upward by striking a barrier, and, thus being chilled abnormally, is compelled to surrender an exceptionally large share of its moisture.

The Properties of the Sweet Pea.—The committee of the National Sweet Pea Society have had under consideration the necessity for drawing up some regulations in regard to the granting by the society of certificates of merit to any new varieties which may be deemed worthy of such an honour; and they have adopted, as a basis for future action, a schedule of properties as constituting quality in the Sweet Pea as under:—1, *Form*.—The standard must be erect, waved, or only slightly hooded; the standard, wings, and keel to be in such proportion to each other as will constitute a harmonious and well balanced flower. 2, *Number of Blooms on a Stem*.—No variety shall be recognised that has not at least three blooms on a stem, gracefully disposed. 3, *Colour*.—Distinct and clear self colours are most to be desired, and, therefore, striped, watered, and edged flowers will not be awarded certificates of merit unless they present quite new or remarkable combinations. 4, *Exceptions*.—Perfectly distinct new colours, such as approaching the blue of *Salvia patens*, the yellow of *Coreopsis grandiflora*, or the scarlet of the Zonal Pelargonium, shall be recognised even if the variety should fall short of the foregoing properties.—R. DEAN, *Exhibition Secretary*.

The Rain and the Crops.—The whole country has now had its soaking, but the result to the farmer is not wholly satisfactory. It has come a little too late for the main cereal crops, which had become fixed in a half-stunted ripeness by the drought. Its main effect in the Wheat fields has been to lay the corn over wide areas, and to make reaping work difficult in consequence. But for the later root crops it has done nothing but good. Another week or two of drought would have ruined the root fields. The later autumn fruit—Apples and Pears—which were in serious danger, have also been largely saved by the downpour.

Roof Gardening in London.—The office-keeper at Southwark Police Court, High Street, Borough, has established a flower and vegetable garden on the roof of the Court, amidst very unpromising surroundings. He has a good show of Lilies, Geraniums, Verbenas, Asters, Calceolarias, and other blooms, and is now in a position to supply the magistrate's luncheon table with Vegetable Marrows and Scarlet Runner Beans grown on the premises. Two fine Marrows were cut quite recently from a very strong plant, which has been trained against a chimney to a height of 6 feet or 7 feet, and which is visible from the interior of the Court through a lantern skylight. The growth and fruition of the plant have been watched with much interest from the Bench.

Jamaican Bananas.—So successful has the new mail and fruit service proved between Bristol and Kingston, Jamaica, that it is now stated that the shipping contractors, Messrs. Elder, Dempster, & Co., are willing to duplicate the service by making it a weekly instead of a fortnightly service—for a consideration. The present contract, which was arranged by the Colonial Office without reference to the wishes of the people of Jamaica, calls for a subsidy of £40,000 a year, payable half by the Imperial Government and half by the Colony. It is stated that for a weekly service Messrs. Elder, Dempster, & Co. are likely to ask another £20,000, payable in the same proportions. Should the duplication of the Bristol mail service be carried out on these lines by the Crown agents for the Colonies, it is likely to meet with the most uncompromising opposition in Jamaica.

Oh, Council, Save that Tree!—Sir Herbert Maxwell has been writing to the Chelsea Borough Council to enlist their sympathetic consideration on behalf of a fine Salisburia tree which stands in that part of the Chelsea Physic Garden which will shortly be taken over by the Council in connection with the scheme for the widening of the Embankment. At the meeting at which Sir Herbert's letter was read, says the "Argus," it was reported by the surveyor "that at the present time the tree was protected from the north wind, and got the sunshine. When the alterations were made it would be unprotected from the north wind, and would not get so much sun, and so would probably die. It would not bear removal, and he could not advise that the Council should adopt Sir Herbert Maxwell's suggestion that part of the old wall be retained. He could only suggest that the tree be allowed to remain and go on as best it could under the new conditions." The popular notion that this Salisburia was the only specimen in this country was contradicted by Alderman Meinertzhagen, who stated that he had two trees of the kind in his own garden, and that there was a fine specimen at Kew. Eventually the Council decided to adopt the surveyor's suggestion, so that we may assume there will be one Salisburia the less in London before many years have elapsed.

Mighty Marrows.—A newspaper named "The Daily Mail" furnishes the following paragraph in its issue of July 26th (evidently to relieve someone from melancholia!):—"Just now competition is keen between amateur gardeners as to who will carry off most prizes at the local flower shows. A medal for a mighty Marrow is eagerly sought after, and a promising plant is tended with the greatest care and solicitude. Some time ago there was a tremendous sensation in a northern village. One of the competitors at the local show continually carried off the Marrow medal and money, until his disgusted rivals began to find it monotonous. His exhibits were always of enormous size, good shape, and excellent quality when sent by the judges. One dark night they scaled his garden wall, and discovered his secret. Each Marrow had been pierced at the stem with a darning needle threaded with twine; the twine end had been drawn back to the centre of the Marrow stem, and the whole connected with a bottle containing water thickly impregnated with sugar. The twine acted in a similar manner to the wick of a paraffin lamp, and the Marrow greedily drank up the sugary and fattening nourishment. Nourishing Marrows in this way is now a fairly common expedient, but not all competitors in show competitions know about it."

An Excess of Fruit.—Too good a harvest is the complaint of the fruit growers in Perthshire. Fully 200 tons of berries were despatched from the Blairgowrie district last week, and prices for Strawberries are down to £7 to £8 per ton. On two of the largest farms the fruit is to be left to rot, as the price offered will not pay the picking. What a happy time the Dundee and Glasgow street boys could spend on these farms; and what an onerous task would fall to the lot of the philanthropist in getting them home again. Raspberries are also a big crop, but the price remains at £22 per ton. At this time last year Strawberries were selling at £23 to £27 per ton. Truly the life of the husbandman is not a happy one where the more plentiful the reaping the less the profit.

Tea in the United States.—With regard to the future of this promising industry, the Secretary of Agriculture is quoted as saying that Americans will soon raise all that is needed for home use. They are now succeeding admirably in the production of Tea in the United States. It is only a question of a short time when they will be able to raise all the Tea demanded for use in that country. The two tons of Tea grown at Summerville, S.C., last year so well satisfied the New York investors interested in the industry, that they immediately formed a syndicate and bought 6000 acres of land in the State upon which Tea will be grown. This department last year sent Tea plants to every Gulf State in the Union from the Carolinas to California for experimental raising. Report from South Carolina says that imported machinery in use there is able to make green tea from the black product in one hour.

A Public Park for Rawtenstall, Lancashire.—Rawtenstall was *en fête* on Saturday, August 3rd, on the occasion of the opening of its new public park, which has just been laid out by Messrs. W. Barron & Sons, Elvaston Nurseries, Borrowash, under the immediate superintendence of Mr. William A. Holmes, formerly of Putney. The new park, which is in the town, was formerly the Oak Hill Estate, and, with the fine old mansion, consists of some 28½ acres. The estate being for sale, it was purchased by Mr. Richard Whittaker, a native of Rawtenstall, and presented to the town as a public park, his design being to carry out a long cherished scheme of giving the children of his native town what they so much wanted, but which they had never before possessed—a properly equipped and abundant playground—and, in addition to purchasing the park, Mr. Whittaker has also borne the entire cost of laying out his splendid gift. The spacious mansion and the original garden about it are retained; the former is to be the home of the free public library, while the garden has been entirely renovated on previous lines. There are plenty of large shade trees about this portion of the grounds; water, with fountains and cascades, have been introduced, together with other appropriate and diversified features; there are three spacious terraces for swings, &c., and as recreation grounds, and altogether the work has been done by the contractors in a manner which has won for them great credit. The park is to bear the name of its donor, and to be known as the Whittaker Park.

Kew Gardens.—"X. Y. Z.," writing to the "Times," under date July 22nd, says:—"May I call attention to the continued exclusion of the public from the grounds of the 'Queen's Cottage,' Kew Gardens? These grounds are geographically part of Kew Gardens, from which they are separated only by a wire fence. The river and the Deer Park are their other boundaries. They contain, besides the cottage itself, glades and woods and thickets of great natural beauty. Soon after the Jubilee of 1897 it was stated officially that the Queen had given orders that the public should be admitted to these hitherto closed grounds. In 1898 nothing further was done, because, as Mr. Akers-Douglas stated in the House, no money for the purpose was provided in the estimates of that year. In May, 1899, the public were admitted to a single grassy track, about 400 yards long, running between wire fences on either side. This was the very least that could be done in compliance with her Majesty's orders. Yet even this walk was rigidly closed from September, 1899, to May, 1900, and again from the following September to May last. It was opened again last May, but was closed, for some reason or other, by the middle of June, and has remained strictly shut up ever since. This is the grievance to which I ask leave to call attention. The late Queen ordered the admission of the public to a most charming piece of ground. Her orders were carried out as slowly as possible, and in the most grudging way. They are now wholly disregarded. I have visited Kew Gardens hundreds of times, and if any member of either House of Parliament will ask a question on the subject he may rely on the accuracy of my facts and dates."

Rhineland.—"Rhineland" opens up fresh holiday districts in the little known side valleys of the Rhine, a country even more charming and varied than the Ardennes, which were made known by Mr. Percy Lindley through "Walks in the Ardennes." Leaving London in the evening, and the chief northern and midland towns in the afternoon, it is possible, at small expense, to reach some of these valleys early the following afternoon, *via* Harwich and the Hook of Holland. A little publication, with the above title, is published at 30, Fleet Street, London, E.C., giving interesting and valuable information to would-be Rhine explorers.

Interesting Planting Experiments.—The German Foreign Office Report for 1901 contains an interesting account of an attempt to improve the vegetation in the vicinity of Swakopmund, the port of German South Africa. The neighbourhood is a dreary and barren desert of sand, and it was necessary to choose such plants as required but scanty soil, could stand considerable changes of temperature, and resist excessive dryness. It was also desirable to guard against the strong sea wind. The latter difficulty was met by planting a screen of wild Tobacco, which, while flourishing well, presented an interesting instance of adaptation to altered conditions. The leaves, which at a distance from the sea are well known to be large and thin, became in the new habitat narrow and thick. Young trees of Oak, Pine, Juniper, Eucalyptus, Date Palm, Vine and Fig quickly perished, but the seeds of the Date Palm and Port Jackson Acacia promised good results. Another instance of adaptation to environment.

July Weather at Belvoir Castle.—The wind was in a northerly direction fourteen days. The total rainfall was 2.69 inches; this fell on nine days, and is 0.13 inch below the average for the month; the greatest daily fall was 0.85 inch on the 24th. Barometer (corrected and reduced): highest reading, 30.302 inches on the 7th at 9 A.M.; lowest reading, 29.568 inches on the 24th at 9 P.M. Thermometers: highest in the shade, 88° on the 18th and 19th; lowest, 41° on the 14th; mean of daily maxima, 73.74°; mean of daily minima, 54.51°; mean temperature of the month, 64.12°; lowest on the grass, 39° on the 14th; highest in the sun, 141° on the 17th; mean temperature of the earth at 3 feet, 59.67°; total sunshine, 206 hours 40 minutes, which is 13 hours 58 minutes above the average for the month; there were two sunless days.—W. H. DIVERS.

Terrific Hailstorm at Hawick and District.—The south of Scotland was visited by the most disastrous thunderstorm within living memory. Untold damage has been done to property, gardens, crops, &c. The storm was accompanied by hail, or rather lumps of ice, many of the pieces being over 2 inches, which lasted for about ten minutes. The nurseries of Mr. John Forbes at Hawick appear to have got the full force of the storm; over 4000 panes of glass were broken, while in the grounds plants and flowers have suffered to an alarming extent, so that Mr. Forbes' well-known exhibits will be absent from many of the leading shows this autumn. Luckily the newest range of houses, which fortunately contained the new Begonia Caledonia, escaped with but slight damage. The storm lasted over five hours, during which time the rain fell in torrents, and the thunder and lightning hardly ever ceased.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
August.										
Sunday .. 4	W.S.W.	deg. 64.9	deg. 58.2	deg. 67.2	deg. 56.0	Ins. 0.01	deg. 66.7	deg. 64.5	deg. 60.2	deg. 48.5
Monday.. 5	W.	60.4	54.8	66.0	51.3	0.09	64.5	64.0	60.4	43.6
Tuesday 6	S.W.	58.0	57.0	75.3	52.5	—	63.5	63.5	60.4	51.7
Wed'sday 7	S.W.	65.9	57.5	76.2	49.6	—	63.7	63.2	60.4	42.2
Thursday 8	S.W.	71.2	64.2	77.0	61.4	—	65.5	63.2	60.4	54.5
Friday .. 9	N.E.	65.6	61.6	82.7	52.0	—	65.3	63.4	60.2	45.2
Saturday 10	E.S.E.	73.6	67.0	85.2	64.7	—	67.5	64.0	60.2	55.6
MEANS ..		66.4	60.0	75.7	55.4	Total 0.10	65.2	63.7	60.3	48.8

The weather during the first part of the week was dull and rather cold with a little rain, the latter part being brighter and much warmer.

Newnham Paddox.

How lovely the country is when the trees are unfolding their tender green leaves, and the verdant pastures have assumed their richest tint. The freshness of spring appeals to all. To the wanderer, who is ever meeting with new scenes; to the rustic, who welcomes such signs of active life; but who can describe the delight of the town dweller who flies from the smoke and din of the city to the restful, glorious country with its sunshine and invigorating breezes? My reverie upon this and various other subjects was recently brought to an abrupt conclusion by the shrill cry of the railway men—"Rugby! Rugby! all change here!" and out the living freight quickly poured upon the platform of that wonderful station, a grand monument indeed to British enterprise. Brinklow was the nearest station to my destination, but it is on a branch line, so it is surely not necessary for me to explain why I decided to cycle the seven miles between Rugby and Newnham Paddox. On the way I traversed a lovely country, so undulating and delightful to the eye, just such scenery as I invariably admire (when I am not cycling). The day was warm, and the ascending slopes seemed wondrously long and steep compared with the descending ones.

tonias; large and healthy specimens of *Pinus pinsapo*, and *Picea Parryana glauca*; massive clumps of *Rhododendrons*, and shapely *Thorn* trees, whose arching branches will soon be wreathed with flowers. Such are the main features of the wild garden at Newnham, with a wide expanse of water for a central object, water which has recently been cleared of coarse and common fish and stocked with choice trout.

The flower garden is situated on the east side of the mansion, and a rather indistinct view of a portion of it is seen on the right of the illustration. Since the photograph was taken, however, a row of *Thuia Lobbi* has been planted to form a boundary, with numbers of *Thuia aurea* and other dwarf *Coniferae* to form a sloping bank inside. This living undulating slope is now exceedingly attractive, and forms a distinct and pleasing feature. The flower garden is laid out in a geometrical style, having a fountain for a central object; the whole of it is seen to advantage from the terrace around the mansion. At the time of my visit there was a gay display of Tulips, Wallflowers, Daisies, *Polyanthus*, and hosts of other plants suitable for spring bedding. So fine a garden entails an immense amount of labour in keeping it in order, and must sorely tax the convenience of the glass structures to provide the necessary plants for summer bedding. The large amount of lawn to be kept constantly mown is also a business of considerable magnitude, but fortunately there is a steam mower at command, and Mr. Harman



ENTRANCE GATES, NEWNHAM PADDIX.

However, the quaint village of Monks Kirby was reached at last, and after a short spin through a well-wooded park I came to the massive wrought iron gates leading to the mansion. Such gates, too, of grand proportions and intricate design, which rank among the finest specimens of the work to be found in Britain. They were brought by one of the ancestors of the present Earl of Denbigh from an estate in Wales, and at great expense erected where they stand to-day, and form a noble entrance to a stately English home.

After a pleasant greeting from Mr. W. Harman, Lord Denbigh's head gardener, we began an inspection of the extensive grounds. Some magnificent Beech trees quickly arrested attention by reason of their great size, clean trunks, and beautiful proportions. Near by, beside a walk leading direct to the mansion, were equally good specimens of Limes, which formed a splendid line of trees to give welcome shade in summertime. Bearing away from the mansion, we traversed a winding walk bordered on either side with a wide expanse of grass and dotted with many fine trees. This part is treated as a "wild garden," and Daffodils and Narcissi have been extensively planted; the flowers of the earlier varieties had faded, but the later ones were sprinkling the fresh green grass with patches of white and gold. All around the many types of trees supplied bright and varied tints of colour; huge Chestnuts with leaves almost expanded; Birch trees with long thin gracefully drooping branches and silvery trunks; *Prunus Pissardi*, a mass of bronzy red; stately Welling-

speaks highly of its great advantages for such work. Many fine specimens of *Araucaria* are growing in the vicinity of the flower garden, but unfortunately the severe winters of a few years ago spoiled some of the lower branches. Pressing on we passed between a splendid avenue of Elms, with a trim grassy walk between. On the way I noticed a pinetum, containing a great variety of promising young trees, which in a few years will be extremely interesting. Near by is a Rose garden, with its central temple, and beds of dwarf around; all the trees were growing vigorously, and give promise of a wealth of flowers during the days of summer so soon to end.

The kitchen garden is a large and fine one, surrounded by substantial walls, which will soon be completely covered with healthy fruit trees of the many kinds required to maintain a regular supply of choice fruits. During Mr. Harman's tenure of office all the old trees have been uprooted and young ones planted. These are managed on skilful and rational lines, by which means the wall space is quickly covered with healthy, fruit-bearing wood. By training the branches thinly but little shortening is necessary, and a cleaner and more promising lot of wall trees would be difficult to find. It is easy to see at a glance that hardy fruit culture is splendidly carried out, as the walks are bordered with espalier-trained trees and bushes, all in fine condition. Large breadths are also devoted to Black and Red Currants and Gooseberries, and each promise to give a splendid crop. Strawberries are grown on an extensive scale, the favorite being Royal Sovereign, as it is found to be always a

reliable cropper, and the quality invariably good. Paxton, James Veitch, and Leader are also grown, but the first named variety proves the "sheet anchor." Grand trusses of flowers were showing on the plants, and if King Frost will spare them there should be abundance of fine Strawberries of Newnham this season.

In an open situation, near the entrance to the kitchen garden, my eyes fell upon a fine breadth of fruit trees. "Ah!" I exclaimed to my guide, "let me see what they are like," for I thought the "canny" man had kept something good in the background. Truly he had, for I found half an acre of as fine bush Apple trees as can be found in Britain. They are all worked on the broad-leaved Paradise stock, were planted five years ago from 9 to 12 feet apart, and yet they have almost filled their allotted space, and the branches were studded with blossom buds. In the management of these bushes there has been no hard cutting back year after year to produce a thicket of shoots. The main branches were simply shortened for a year or two to form a shapely tree; they were then allowed to "go," but kept thinly disposed, the result being that blossom buds quickly formed on the long branches, and strong growth gradually ceased. The trees began to bear fruit the second year after planting, and have cropped regularly since. A practical demonstration of this kind should do much to show that

bunches, and some very large; the largest when ripe should weigh 4 or 5 lbs., and they are likely to be as well finished this year as on previous occasions, when Mr. Harman proved victorious at the Aquarium and Birmingham Shows. In another house, 28 feet in length, one Peach tree of Hale's Early entirely covered the arc shaped trellis along the front, and another covered the back wall; such trees, too, with strong shoots, large leathery leaves, and, above all, abundance of fruit. In two other houses Peaches were equally well grown, the varieties being *Violette Hâtive*, *Bellegarde*, and *Dymond*. In one of these houses I noticed an exceptionally good batch of seedling *Amaryllis*, with flower stems fully 1½ inch in diameter, some carrying six flowers.

In the flowering house *Cyclamen*, *Roses*, *Calceolarias*, and hosts of other plants afforded a brilliant display; some plants of the former, growing in 5 and 6-inch pots, carried fully 100 flowers. One span-roofed house is devoted to the popular *Malmaison Carnations*; one, two, and three-year-old plants were represented; some of the latter were large specimens, carrying splendid flowers, but as a rule plants two years old are preferred. Careful watering is here, as in so many other places, considered the secret of success in *Malmaison* culture. Among new varieties *King Oscar* was, I thought, very promising; but



NEWNHAM PADDON.

Warwickshire is well adapted for fruit growing. The vegetables I fear must receive but scant attention, for I have yet much to write about. I therefore dismiss that part of my subject by saying that Peas, Beans, and other early sown crops were coming on well. Asparagus beds were yielding good supplies of choice vegetables, and late Broccoli and a grand bed of *Ellam's Early Cabbage* were ready for cutting in quantity.

The glass structures, though noticed last, are by no means the least in importance. The principal range of fruit houses is a fine one, and is turned to good account in growing splendid fruit. Two houses are occupied entirely with *Black Hamburgh* and *Foster's Seedling Grapes*, which for quality are hard to beat early in the season. In the earliest houses the berries had reached that stage when they should soon show signs of colouring. In the adjoining one they had just been thinned. A glance was enough to show that Grape growing is carried on at Newnham by a master hand; each Vine, each shoot, is allowed ample room, with the result that the foliage is thick and leathery, and the bunches sturdy and shapely. The back wall of one house was entirely covered with a Vine of *Foster's Seedling*, which was carrying a good crop, and Mr. Harman informed me that it cropped well every year. I have never before met with so successful an example of Grape growing on the back wall of a vinery, where the roof above has also been entirely covered with Vines. The Vines in the house devoted to *Muscats* are in fine condition. There were plenty of good shapely

Princess of Wales is the favourite, and is largely grown. Other houses are devoted to Cucumbers, Melons, and stove plants, the latter of a size suitable for decorative purposes. Cucumbers are exceptionally well grown; from a house 30 feet in length 432 "Cues" had already been out, yet the luxuriant plants were still carrying heavy crops.

In cool pits *Chrysanthemums* grown for the production of large blooms were looking the picture of health; in fact, they were just such plants as one might expect to find under the charge of one who years ago won his spurs as an exhibitor. In another pit I noticed good specimens of that new and popular flowering plant, *Kalanchoe flammea*. Those who require flowers which will last several weeks when out should grow this novelty. Time flies! The silent hour of midnight has come, and I must draw to a close these brief and imperfect notes of the beautiful Warwickshire home of the Earl of Denbigh, a nobleman of many parts, whose time is largely occupied with public duties, which often take him away from such pleasant surroundings. Fortunately, however, both the Earl and Countess of Denbigh take the keenest interest in their gardens, and, during the fifteen years that Mr. Harman has controlled his present charge, the relationship between employer and employed has been of the happiest description.

Before I lay down my pen, I have to tender my heartiest thanks to Mr. and Mrs. Harman for their kindly hospitality to a wandering scribe, who hopes again, at some future time, to spend a few pleasant hours with a genial son of Erin.—H. D.

Tent Caterpillars.

Two species of so-called "tent caterpillars" are frequently found on various fruit trees, especially on the Apple, Plum, and Pear. By far the commonest and most destructive is the lackey moth caterpillar (*Clisiocampa Neustria*). But in parts of England, notably districts in Kent, the somewhat local brown-tail moth (*Porthesia chrysorrhœa*) does almost as much harm in some seasons; this especially applies to the present year, the caterpillars having done considerable damage to Apple and Plum orchards in parts of Kent. These two insects are called "tent caterpillars" on account of the larvæ forming tent-like nests of silk on the trees, in which they live during their early existence, and beneath which they shelter during wet weather, and at night when they are more mature. The damage caused by these two larvæ can easily be prevented, and even when they have a considerable hold on the orchard they can be remedied to some extent by spraying. Tent caterpillars also occur in great numbers in America; there, as here, being very ravenous feeders, they soon strip the foliage off the trees, and cause the fruitlets to fall. As there is some difference in life history as well as in appearance between the two species, they are best considered separately as far as their natural history goes; prevention and treatment are the same for both species.

The Lackey Moth.

The lackey moth (*C. Neustria*) is widely distributed over the south, west, and middle of England, but is by far more abundant and destructive in the south and west than in other parts. It does not occur further north than York, where it is usually rare. Always more or less prevalent in the south, at certain times it occurs in greater abundance, and Apple and Pear orchards are sometimes stripped of every vestige of foliage by the caterpillars. It is more abundant in France than elsewhere; there being laws compelling growers to cut off and destroy the "tents" formed by the larvæ. Guérin Méneville states that it is one of the most injurious fruit and forest pests in France. Kollar gives an account of it, and says that it is troublesome in Germany.

The moth is very variable in colour and size, and measures about an inch in expanse of wings in the male, and $1\frac{1}{2}$ inch in the female. The fore wings are a rusty reddish-brown, yellowish-brown, ochreous or brick-dust red, with two pale or dusky brown transverse lines across them, the space between the two bars being often more deeply coloured than the rest of the wing; the hind wings are the same tint as the fore, but often a little paler; the thorax and abdomen are densely scaly. The adult may be taken on the wing at dusk in July and August, and even as late as September. The eggs are deposited by the female in rings on the smaller shoots of the fruit trees, each band containing from forty to over 200 eggs. These bands remain on the trees all the winter. When the wood shrinks they can be turned round and round with ease. Being greyish-brown in colour the ova are readily seen on the dark ground colour of the twigs, and are thus well-known objects in an orchard.

About the end of April they hatch. The young larvæ are almost black at first, and more or less hairy. Very soon after they commence to form a fine web, enclosing a few leaves, and beneath this little tent of silk they continue to feed for some time. As they grow the silken house is enlarged, until in some large colonies it may reach nearly a foot in length. At first the larvæ feed entirely under the tent, but as they grow they spread out over the trees, and feed off the leafage and blossom, returning to the web at night and in wet weather. They become brilliantly coloured as they grow, being bluish-grey, with two black spots on the segment next the head, and two also on the bluish-grey head; three orange-red stripes along each side, and between the two lowest of these is a broad blue stripe with little black specks, these brilliant lines being separated by black and black spotted with blue, and a white stripe down the back with a narrow black line on each side; the whole larva is covered with rather rusty hairs, darker above than at the sides. When full grown it reaches $1\frac{1}{2}$ inch in length. On warm days they may often be found in batches, several lying parallel with one another, either on the outside of the tent or along the branches. They are somewhat timid, and fall to the ground on the tree being shaken, but soon crawl back to the foliage again. They are sometimes said to lower themselves by a silken thread, but this is not certain.

From the middle of June to the end of July they reach maturity, and spin a delicate loose white cocoon, the silk mixed with a yellowish powder and numerous hairs of the larvæ. These cases are formed amongst the leaves, on the bark, amongst grass below the trees, on walls, fences, &c.; always above ground. In this cocoon the larva changes to a dark-brown pupa, from which the moth hatches out in from two to three weeks. The "lackey" larvæ feed also on Oak, Hawthorn, and many other trees and shrubs.

The Brown-tail Moth.

According to Stainton the brown-tail moth (*Porthesia chrysorrhœa*) is local, and not to be found everywhere. Where it does occur, however, it is often very abundant. It is recorded from Lytham, Epping, Teignmouth, Lewes, Lymington, Tenterden, Ramsgate, Stowmarket, Black Park, Chesham, Deal, Dorking, Newhaven, Bisterne, Bristol, Norwich, Canterbury, and many other places. It has been very abundant this year in Kent, and has done quite as much if not more harm in the orchards than the lackey moth. It is always more or less abundant in various parts of the country. The moth appears towards the end of July and in August. The female has pure white fore wings, with a faint black spot; hind wings pure white.

The male has similar fore and hind wings, white head, thorax and abdomen, the apex of the latter having a golden brown tuft. In length the wing expanse varies between $1\frac{1}{4}$ inch and $1\frac{3}{4}$ inch. It is a night-flyer, resting during the day on walls, leaves, lamps, &c., and is then very sluggish, falling down as if dead when its resting place is shaken. The female lays her eggs on the under surface of the leaves of the Oak, Elm, Black and White Thorn, Apple, Plum, and sometimes Pear. Each patch of eggs is covered over by hair from the female's tail, and completely hidden; the eggs are round, of a golden hue, and as many as 250 may be counted in each batch.

The larvæ hatch out about the beginning of August, and live through the winter. At first they are very small, of a dirty yellow appearance, with a black head, and four rows of black dots and numerous hairs. They at once spin a single leaf together, eating only the epidermis, and attaching the leaf by silk to the twig so that it cannot fall off. Towards September they commence to make a regular tent or nest, attaching a number of leaves together by silk. The leaves are lined and covered with silk, and all firmly united. This nest is used as a place of protection from cold and damp, and as a nocturnal residence, just as in the lackey moth. During the latter part of August the larvæ moult, and still feed on as long as the leaves contain any sap. Even after the leaves have fallen it is not unusual to see the larvæ on a sunny warm day basking in the sun outside the tent. As the weather becomes cold, they become dormant and remain in their dwelling. The hardest frosts do not seem to harm them. In the spring they commence to feed on the leaves as they open, the larvæ wandering freely over the trees. Very frequently the colony divides, two nests being made, and sometimes even a third is formed.

Early in May they moult again and assume a deep brown appearance with reddish-brown hairs, a row of white spots on each side, a narrow double broken line of red alone on the dorsum, black between, and with two prominent bright red tubercles on the back of the eleventh and twelfth segments, depressed in the centre; these tubercles can be elevated or depressed by the larvæ at will. After this moult they spread over the fruit trees, forsaking their nests, and then devour the leafage very ravenously. From the end of June to the beginning of July they spin a cocoon amongst the leaves of fruit trees, as a rule several together forming a large mass united by a dusky web. In this they change to deep brown pupæ. Kollar says as many as twelve may be gathered in one ball; as many as forty has been counted on a Damson tree. From these pupæ the moths hatch out in the latter part of July and August, and soon commence to lay fresh eggs on the trees.

Natural Enemies.—Kollar records that both the eggs and the larvæ of *P. chrysorrhœa* are attacked by ichneumonids. This has not been observed in Britain. Both these larvæ being hairy they are avoided by birds, so that little help is given by them in the orchard where these pests are causing the harm. The cuckoo is the only bird known to devour these hairy caterpillars. Kollar also mentions two beetles as destroying the larvæ of *C. Neustria* on the Continent—namely, *Calosoma sycophanta* and *C. inquisitor*.

Prevention and Treatment.

After an attack of lackey moths the orchards should be gone over in the winter and all egg-bands collected and burnt. Of course on large trees this is not possible, but where it can be done, it is a rule that should always be followed. The small tents of the brown tail should also be looked for during the winter, and cut off and burnt. Any tents left should also be collected and destroyed in the early summer either on a dull wet day or of an evening, that is when the caterpillars are at home, or no good would be done. As the larvæ readily fall when shaken, care should be taken to hold boards or a sheet beneath the pest when it is being cut off, otherwise little good will accrue, as the lackeys soon get back to the trees.

A great deal of damage will be saved by spraying as soon as the attack is noticed, especially when the tents cannot be reached. For this arsenical washes should be used. Of these washes the three best known are Paris green, London purple, and arsenate of lead. The latter is the best wash of the three, killing the larvæ and yet not damaging the leafage, as sometimes happens with Paris green.

Paris green wash is prepared as follows:—Add $\frac{1}{2}$ lb. Paris green to 100 gallons of water, and mix up 1 lb. of lime well with the same. This must be kept well stirred. Paris green can be used where

poultry and stock are kept, the quantity applied to the trees being so small that it will have no effect upon animals. London purple is used as the above, the lime being again essential. Arsenate of lead is prepared as follows:—Dissolve 1 oz. of arsenate of soda in warm water, and add to 16 gallons of soft water. Then dissolve 3 ozs. of acetate of lead in water, and pour into the 16 gallons of liquid. Add to this 2 lbs. of treacle. In the place of treacle the arsenate of lead wash may be mixed with paraffin emulsion, and so a double insecticide prepared. In all cases proper sprayers must be used with fine nozzles, so that a dense mist of the wash is thrown on the trees. This wash when properly mixed is most successful, and never burns the leafage as growers often find to be the case with Paris green.—("Board of Agriculture Leaflet, No. 69.")

Gadding and Gathering.

"HERE AWA', THERE AWA'."

COLCHESTER is the largest of the towns in Essex. It boasts of about 30,000 inhabitants. Like Jerusalem and the Modern Athens, it is built upon a hill, with valleys and broad straths around it, and altogether presents a gratifying composition to the eye when viewed objectively. Tall spires tower upward from among their encirclement of trees, and beautiful villas are numerous dotted in profusion over ground of varying planes. It is in juxtaposition to this attractive township that the renowned Rose nurseries of Messrs. B. R. Cant & Sons, F. Cant and Co., and that of D. Prior & Sons are situated.

Messrs. D. Prior & Son.

For the high quality of their Tea Roses this firm has a just celebrity. Their twenty-eight odd acres of roseland slopes in a number of directions, part south, part north, part east, and part west. The soil on the whole is amongst the best in that part of Essex, and indeed some of it is an ideal Rose soil. Nowhere have I seen young plants grow so quickly in a short period of time as they do in the nursery of Messrs. Prior & Son. Here can be seen immense arbours screened with excessively robust specimens of Crimson Rambler, and the effect of a grand Rambler hedge vividly impressed itself on my mind. All the leading Teas are grown liberally, and of course Roses in every other section are found in greater or less amount. New varieties are also included so soon as their merits have been observed, but I do not think the Messrs. Prior do any hybridising themselves. On the occasion of my visit in July budding had started, and a strong gang of men were busily employed.

Standard Roses are somewhat of a feature here, and fine vigorous plants they were. The trade in cut Rose blooms during the season is really enormous, and during the short period of my call Mrs. William Prior, who sees to this department of the business, showed me telegrams with orders for as many as 2000 blooms in one consignment. Indeed, the summer is the rosarian's harvest!

But Roses and Rose growing are by no means the only stock handled by Messrs. Prior; they have fine ranges of Tomatoes, and a few vineries. Pot Vines were stout and healthy. Most of the fruit, however, is disposed of in the neighbourhood. Who has seen a Merryweather patent water-pump at work? I saw one here, and was silently amused at the delightful primitiveness of it. A small horse was "doing the round" of a very circumscribed circle, with a boy upon a sort of axle-bar joined to the piston which drew the flow of water. I should like to have gone and inspected this arrangement, but there were other places at which a hurried call had to be made.

Braiswick Nurseries.

The visitor to Messrs. Frank Cant & Co.'s extensive and well-situated Rose grounds will find an enormous selection of the exhibition class of Roses. By this I mean all the tried H.P.'s, H.T.'s, and Teas. These are cultivated by the thousand. The favourite Bessie Brown, raised by Alex. Dickson, has come to the same high perfection in the Braiswick grounds as elsewhere this year. This is a wonderfully fine bloomer, and no praise of its good qualities can be too great. It is vigorous, and never seems to become "ragged;" the colour is soft creamy white, and in shape it is globular, with tapering petals. White Lady is yet another of the specially fine Roses awaiting recognition in many widely separated gardens. It was raised over ten years ago by Mr. Wm. Paul. It is a good dwarf H.T., with creamy white flowers, and resulted as a sport from Lady Mary Fitzwilliam. Amongst H.P.'s that have seldom been better than they were during the past season are A. K. Williams, a variety that nearly everyone will say is indispensable, and Alfred Colomb, which is the older variety of the two. The colouring in these red Roses seems to intensify in brightness without becoming less rich in depth, in dry seasons.

The pink-flowered Roses do not all come into the same category in this reference. The variety Mrs. John Laing, for instance, has not been nearly so fine on the average this summer compared with past seasons. Probably the heat was too concentrated just at its hey-day of flowering

perfection; but then, again, preceding summers have been very dry and warm. At any rate, the Mrs. Laing blooms have not been nearly so handsome at Braiswick as heretofore. On the other hand, the recently introduced varieties, Mrs. Cocker and Ulster, both of which resemble Mrs. J. Laing, have been as fine as one could desire. Mrs. Cocker is a favourite here, because of its vigour and the beautiful globular form of its flowers. Another good pink variety is Heinrich Schultheis, which has been universally in good condition during the past summer. When first it opens this is a charming Rose, and has the additional quality of being slightly fragrant. And for massing in beds few Roses will yield a greater wealth of pretty blooms than H.P. Captain Christy. It does well all through the summer, and particularly well late in the year. Bardou Job, though oftener included in exhibits of "garden" Roses than in select exhibition stands of individual blooms, is a very bright flower, and worthy of a place anywhere. The same lines apply to that most brilliant of all yellow H.T.'s, Augustine Guinoisseau.

Few will dispute the assertion that Kaiserin Augusta Victoria as an exhibition Rose has only about half a dozen other rivals in its section. The half dozen might be named as Mrs. Edward Mawley, Killarney, Clara Watson, Madame Cusin, Maman Cochet, and White Cochet. All of these stand so high that no further reference to them is desirable. Madame de Watteville furnishes a very useful pot Rose, and one that throws plenty of bloom. La France '89 has very few admirers so far as I can discover, and certainly it does not come within a hundred miles of its parent, the true La France. Danmark, which came from abroad in 1890, has reached the high-water mark many times this year, and will no doubt gradually become more popular on the exhibition boards. Belle Siebrecht, otherwise known as the climbing Mrs. W. J. Grant, is very interesting, and a great acquisition to its special class; the vigour of it cannot be gainsaid.

I mentioned Killarney a few lines higher. This Rose was sent out only three years ago from Ireland, but already it has become recognised far and near. The colour differs from that of all other varieties, being rosy-pink suffused very slightly with lilac, enough to give it great distinctiveness and charm. Gustave Regis and Grös an Teplitz, though more useful as purely decorative varieties, are rich, brilliant, and free. Marquise Litta, however, is suitable both for garden and for exhibition.

One generally finds Rose Marquis of Salisbury included in select displays of decorative varieties. The brilliant and glowing intensity of its rich carmine crimson flowers are exceedingly beautiful. When speaking of the half dozen that equal Kaiserin, I might have included Mrs. W. J. Grant within the number, in place of Killarney, for this is certainly an ideal H.T. It has only been before the public for a few years, yet it is already a general favourite. Caroline Testout takes after La France, and, like the latter, is a free bloomer and very useful Rose.

Of the Teas proper and Noisettes one need but name Anna Olivier, Alistair Stella Gray, Francisca Kruger (a grand sort), Ethel Brownlow, Madame Bravy, Mrs. Edward Mawley (already referred to), and the exquisitely beautiful Muriel Grahame. These, when at their best, are really so delicately fine, that it is only for a very short while one can admire them in their perfection. They are quite hardy, even a long way north of the Tweed, so that no one need have scruples on this point. Comtesse de Nadaillac, an old favourite, still maintains its high position, and Caroline Kuster is almost equally good. Ernest Metz appeared in high condition in numerous exhibitions during the past season, and must also be accorded a place in select lists. Homère is a more decorative variety, but occasionally meets the requirements of the exhibitors in classes for Teas. Mme. Berkeley, with salmon-pink blooms, is yet another variety I greatly admired at Braiswick.

But I must hasten to notice just a few other Hybrid Perpetuals. Margaret Dickson stands very high, as do others of the famous Irish-raised Roses, most of which have, at one time or another, been awarded the National Rose Society's gold medal; Marchioness of Dufferin, Marchioness of Londonderry, Marchioness of Downshire, Mavourneen, and Jeannie Dickson, are a few of these. They are all Roses of vigorous and cleanly habit, producing blooms of size, good form, and high colour. Rev. Alan Cheales, a deep lake colour, is likely to come more and more into favour; it is quite a recent novelty, and worthy to bear a name so honourable. Mrs. Frank Cant is a new Rose of great vigour, with pink flowers, and is prolific. It is a capital Rose for bedding purposes, and one likely to furnish a goodly supply of cut blooms. I have not yet seen it on the exhibition boards. It resulted as a cross between Madame Gabriel Luizet and Baroness Rothschild. Mrs. Sharman Crawford is almost as well liked as Mrs. J. Laing, and Ulster, which, I have noted, will in future be on a level with these.

The new Roses of recent years further include Dawn, a lovely rose-pink H.T., useful for all decorative purposes; Liberty, grand for autumn use, and a splendid pot Rose; Tennyson, pearly white, dwarf, robust, and grand in form. J. B. M. Camm is described as a Hybrid Bourbon. This is a very handsome and distinct pale salmon-pink Rose, commendable in every sense. There are also three Polyantha Roses that have begun to create attention, and these are Lenchtstern, Eugénie Lamesche, and Leonie Lamesche.—WANDERING WILLIE.



Roses in Pots v. Roses Planted Out.

IN the majority of private gardens there is a great demand for good Roses during the spring months to succeed those produced on early forced plants, but in very few instances are adequate measures taken to provide a sufficient supply. During April and May it is usual to depend upon bushes or climbers planted out under glass, but it has often occurred to me that plants grown under such conditions give too little return for the space they occupy during the remainder of the year. This objection does not of course apply to Roses trained thinly to the roof of a conservatory to give additional beauty and interest to that structure, nor to others trained on the back wall of any structure; but to devote a house entirely to Roses throughout the year is to my mind a mistake. During summer we can get hosts of fine blooms from the open air, and during the spring months a greater number of good blooms can be grown in a given space by keeping the plants in pots than by adopting the planting out system. And, moreover, the pot system has this great advantage—viz., that soon after the flowering period is over the plants can be placed out of doors, and for the following six months the house can be utilised for other purposes. The above remarks apply especially to H.P.'s, but also in some degree to Teas.

I have thoroughly tested both systems, and am so convinced of the advantages of the pot system, that last year I uprooted the bushes in a house 100 feet in length, and next year another house will be similarly treated. By taking the course indicated we have been able to grow a heavy crop of Tomatoes in the 100 feet house; as soon as these are over Chrysanthemums will succeed them, and when the latter have been disposed of, the opportunity occurs to cleanse the house and refill it with Roses in pots or Callas. From a market grower's point of view these three or four crops form an admirable succession with which to keep a structure profitably employed.

The management of Roses in pots is simple enough when any suitable system is well carried out, and it is well to point out here that success may be obtained by following various methods which sometimes seem to be diametrically opposed to each other. For instance, I have known growers and writers to assert that it is useless to expect good Roses from plants in pots which were only potted up the previous autumn, but I have proved the assertion to be wrong on more than one occasion. The man who lifts dwarfs from the open air and pots them during the autumn, and the following January places them in a forcing house, cannot expect good results, but if they are placed in a cool house in March the finest of blooms may be obtained a few weeks in advance of those grown in the open air.

Those who wish to have abundance of good Roses in pots during next April and May should adopt the following plan. Early in November procure strong dwarfs lifted from the open air; pot them in 6-inch pots, and plunge over the rim pots in the open air. The compost I use is one formed of three parts rather stiff loam, one of horse droppings (prepared as for a Mushroom bed) with a 6-inch potful of bonemeal added to each barrowload. The compost should be used in a fairly dry state, be rammed firmly, and the plants be thoroughly watered once before they are plunged. About the middle of February cut the shoots on half the number of plants hard back, and remove the plants to a cool structure, where they can be brought on gradually. A month later treat the remaining plants in the same way, then with due attention to watering and feeding occasionally with top-dressings of artificial manure, fine blooms may be obtained. Early in June plunge the whole collection in ashes in the open air, and throughout the summer pay due attention to watering, feeding, and syringing, but no repotting will be required next season. Such plants may, if necessary, be forced early during the following winter, and during the succeeding June or July they will need repotting. After that operation has been performed they ought to be shaded with canvas, or placed in a shady position for a few weeks to insure the production of strong clean growths. Anyone who will put the above simple ideas into practice will, I am sure, be satisfied with the result. Two cardinal points which should be kept constantly in view and acted upon are, first get plenty of active roots, then feed regularly with artificial and other liquid manures.

Instead of growing a large number of varieties I find it best to select a few really good ones and grow them largely, and the following may be relied upon for pot work:—H.P.'s, Mrs. J. Laing, La France, Baroness Rothschild, Mme. Gabriel Luizet, Merveille de Lyon; all the above are pink or rose in colour. The following are good red or crimson sorts:—Général Jacqueminot, Alfred Colomb, Earl of

Pembroke, Grand Mogul, Duke of Edinburgh, Mdle. Annie Wood, and Duke of Albany. Teas—Catherine Mermet, Grace Darling, Hon. Edith Gifford, Isabella Sprunt, Kaiserin Friedrich, Mme. Lambard, Niphetos, Perle des Jardins and Souvenir de S. A. Prince.—D. K. N.

The Oldest Flower.

There seems every reason to believe that the Rose is the oldest flower of which there is any record; so great is its antiquity that all account of its origin has been lost. It is not mentioned in the biblical writings earlier than the reign of Solomon, but the allusion to it then made is such as to indicate that the flower had already long been known. In Egypt the Rose is depicted on a number of very early monuments, believed to date from 3000 to 3500 B.C., and in the tomb of an Egyptian princess, disinterred a year ago in southern Egypt, several hermetically sealed vials were found, which, when opened, contained genuine attar of Roses, so that the modern claims for the discovery of this delicious perfume are vain. Rose water, or the essence of Roses, is mentioned by Homer in the "Iliad." Both the Greeks and Hebrews probably borrowed the idea of its manufacture from the Egyptians, and these, for aught anybody can tell, may have had it from the Chinese. The Rose is a flower that is supposed by the people of every land to be so well known as to need no description and hardly mention, for it is a singular fact that every continent on the globe, with the solitary exception of Australia, produces wild Roses. Even the frozen regions of the north, where the summer heat lasts but two or three months, and is at best a season which may be described as very late in the autumn, produce their wild Roses, and travellers through Greenland, Kamchatka, and northern Siberia found, in the proper season, an abundance of blossoms, while the crews of whaling vessels which call at Spitzbergen usually come off shore with bouquets of the native Spitzbergen Rose.

Societies.

Royal Horticultural, Drill Hall, August 13th.

A brilliant display of flowers was brought together in the Drill Hall on Tuesday last. The major portion of the exhibition came with the floral section, Gladioli, Begonias, and Dahlias contributing largely to the beauty of the show. Orchids were few in numbers; Messrs. J. Veitch & Sons were the only exhibitors in this section, sending about a dozen plants. The finest exhibit in the fruit section was the collection from Mr. G. Kelf, Regent's Park, which was remarkable from the fact that all the specimens were grown within two miles of Charing Cross.

Fruit Committee.

Present: G. Bunyard, Esq. (in the chair); with the Rev. W. Wilks, and Messrs. J. Cheal, W. Bates, W. Farr, S. Mortimer, A. Dean, W. Pope, G. Kelf, H. Markham, G. Woodward, F. Q. Lane, J. H. Veitch, W. Poupart, J. Willard, and G. Reynolds.

Mr. Geo. Kelf, gardener to Miss Adamson, South Villa, Regent's Park, contributed a collection of twenty-eight dishes of fruit. The table was rendered additionally attractive by the aid of small Cocos and Crotons. The specimens proved admirable culture under conditions that are by no means favourable to gardening. Amongst others we noted Grapes Buckland Sweetwater, Muscat of Alexandria, Foster's Seedling, and Black Hamburg; Peaches Bellegarde and Barrington; Nectarine Early Rivers; Melons Ringleader, Frogmore Scarlet, and Hero of Lockinge; Cherries Morello; Plums Jefferson, Early Transparent Gage, Golden Gage, Reine Claude de Comte Althann, and Kirke's; and Tomatoes Sunbeam and Diamond Jubilee.

Messrs. W. Ray & Co., Teynham, Kent, contributed several boxes of the grand late black Cherry Noble, which is fast gaining in favour. From Messrs. Cross & Son, Wisbech, came very fine fruits of Apple Early Victoria. Messrs. Kelway & Son, Langport, sent fruits of the Japanese Honey Berry. A collection of Peas was shown by Mr. B. Lockwood, gardener to Alderman A. Walker; there were eighteen dishes in all, of which The Gladstone, Lichfield Hero, Hartforth Success, Sutton's Perfection, Daisy, Phonograph, Glory of Devon, Duke of Albany, and Carter's Seedling were the best. Messrs. Barr & Sons, King Street, Covent Garden, staged Cabbages Best of All and Little Queen; while Messrs. Nutting & Sons, 106, Southwark Street, staged Cabbage Prince's Improved Nonpareil. Messrs. Sharpe & Co., Sleaford, were represented by Potato Express; Messrs. Dickson & Robinson, Manchester, by Potato Early Jubilee; and Mr. R. D. Hughes, Middle Lane, Denbigh, by Potato Glory of Denbigh. Mr. A. Dean, 62, Richmond Road, Kingston-on-Thames, showed Dwarf Beans Smythe's Fawn and Surrey Prolific.

Some handsome roots of Beet Dobbies' Selected New Purple were staged by Messrs. Dobbie & Co., Rothesay. Apple trees in pots made quite a feature of the exhibition. They had been sent by Messrs. H. Cannell & Sons, Swanley, and were well fruited. The varieties comprised Bismarck, Wellington, Lady Sudeley, Devonshire Quarrenden,

Stirling Castle, Warner's King, Cellini, Red Astrachan, and Grenadier. The same firm sent also dishes of Apples and a few varieties of Pears.

The Fruit and Vegetable Committee confirmed awards made at Chiswick to Potatoes Early Jubilee, Express, and Glory of Denbigh; to Cabbages Prince's Improved Nonpareil, Best of All, and Little Gem; and to Dwarf French Beans Smythe's Fawn and Surey Prolific.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. C. T. Drury, R. Dean, H. B. May, G. Reuthe, J. Walker, W. Howe, W. Bain, J. Hudson, E. T. Cook, C. Dixon, E. H. Jenkins, C. E. Pearson, W. J. James, G. Gordon, W. P. Thomson, and H. S. Leonard.

The whole of one centre table was given over to the superb Gladioli, for which Messrs. Kelway & Son, Langport, have long been famous. The 500 spikes were magnificent, and carried blooms that were large in size, of fine form, and beautifully coloured. The varieties were so numerous that we cannot pretend to name a tithe of them. We noted, however, J. C. Clarke, Ardent, Kenwyn, F. Field, Prince Henry of York, Mrs. Dobree, Mayor of Swansea, Thos. Moore, Langport Wonder, Calliphon, Pedias, Mrs. Stuckey, Fashoda, Mike Lamborne, Khedive, Arthur Toms, Oppins, Eclipse, Snowdrift, Regalia, Adatha, J. T. Harvey, Alfred Henderson, Besler, Electra, General Buller, Duke of Devonshire, Kate Kove, Beron, Utopia, Marcianus, Kipling, Agraulis, Princess Beatrice.

Mr. Simpson, gardener to R. C. Foster, Esq., Sutton, Surrey, was represented by a very beautiful collection of Sweet Peas. Excellent flowers of all the best varieties were included, and the exhibit was particularly attractive. Messrs. T. S. Ware, Ltd., Feltham, had a table of hardy flowers, with Cannas, Dahlias, and a few Gladioli. The group was scarcely so bright and fresh as this firm usually sends. Messrs. J. Laing & Sons, Forest Hill, arranged a collection of both double and single tuberous-rooted Begonias. There were some varieties of conspicuous merit amongst them. This firm also showed a few cut blooms of Streptocarpus. Messrs. J. Veitch & Sons, Ltd., Chelsea, had a semicircular group in which Helianthus and Tritomas were conspicuous. The same firm also sent Clerodendron trichotomum, Kolreuteria japonica, Andromeda arborea, Apera arundinacea, Cyrilla racemiflora, with hybrid Rhododendrons in fine variety.

Messrs. Dobbie & Co., Rothesay, staged a collection of Zinnias in distinct colours. Some of the flowers were of splendid form and substance, and beautiful colour. Seeing these, one regrets that Zinnias are not more grown. The same firm sent Marigolds Prince of Orange and Lemon Queen; both are African varieties of superb form. Professor Hartog, Cork, sent a collection of Abutilons. Mr. Amos Perry, Winchmore Hill, had a large collection of herbaceous flowers; they were shown in large bunches, and looked well. Messrs. J. Cheal & Sons, Crawley, arranged a collection of eight Acacias, all distinct; they were quite a unique feature of the show. Mr. Fox, gardener to Mrs. Davies Evans, Llanybyther, showed a collection of Water Lilies; some of the flowers were fine. Excellence of quality characterised the hardy flowers from Mr. Manrice Prichard, Christchurch, Hants. There were practically all kinds now in flower, shown in bunches of distinct kinds. Mr. John Russell, Richmond, had a grand collection of Crotons; the plants were beautifully grown, and carried splendid foliage.

Messrs. Jones & Sons, Shrewsbury, staged a collection of Sweet Peas. Considering how late it is now getting the flowers were excellent in colour, and of good size. The same firm sent some fine Cactus Dahlias. Messrs. R. Wallace & Co., Colchester, sent hardy flowers, in which Liliums were conspicuously beautiful. Gladioli were also good, as were Montbretias. Mr. A. W. Wade, Colchester, staged a small group of hardy flowers in variety. Mr. S. Mortimer, Rowledge, Farnham, was represented by a magnificent collection of Dahlias. The Cactus flowers were superb, especially Mrs. H. J. Allcroft, John Burns, Starfish, Nesta, Emperor, Britannia, J. W. Wilkinson, Zephyr, Lord Roberts, and Prince of Yellows. Mr. Mortimer also sent some grand Shows and Fancies; the flowers were of good form and splendid colour.

Mr. J. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Ealing, W., had a superb collection of Water Lilies; they were arranged in shallow troughs with their own foliage, and the exhibit attracted as much attention as anything in the show. Some of the best were stellata, gigantea, pulcherrima, Marliacea rosea, M. albida, M. chromatella, M. rubra punctata, odorata rosacea, Robinsoni, lucida, candida, gloriosa, pygmaea, Gladstonei, flammea, Ellisiana, and tuberosa.

Medals.

Fruit Committee.—Silver-gilt Knightian medal to Mr. G. Kelk; silver Knightian medal to Messrs. H. Cannell & Sons; and silver Banksian medal to Alderman A. Walker. Floral Committee.—Gold medal to Mr. J. Hudson, V.M.H.; silver-gilt Flora medals to Messrs. J. Russell, Jones & Son, S. Mortimer, and J. Veitch & Sons, Ltd.; silver Banksian medals to Messrs. M. Prichard, A. Perry, and R. Wallace and Co.; and bronze Flora medals to Messrs. J. Laing & Sons and W. Simpson, and Miss Davies Evans.

Certificates and Awards of Merit.

Amaryllis Belladonna maxima (J. Hudson).—A splendid form that has brighter colour, greater substance, and increased size (award of merit).

Blackberry Wilson, jun. (J. Veitch & Sons).—This is now comparatively well known. The fruits shown were of splendid flavour (award of merit).

Canna Mrs. G. A. Strohlein (H. Cannell & Sons).—A large flowered crimson scarlet variety of splendid quality (award of merit).

Carnation Sir R. Waldie Griffith (Laing & Mather).—An orange-red faintly clove scented variety (award of merit).

Cyrilla racemiflora (J. Veitch & Sons, Ltd.).—A quaint and very beautiful plant. The racemes are carried completely round the stems; the flowers are white (award of merit).

Gladiolus Duc d'Abruzzi (M. Prichard).—A fine variety of the Lemoinei section. The colour is dark and light purple with rose (award of merit).

Gladiolus Lumineux (M. Prichard).—A soft lemon yellow with scarlet in the throat (award of merit).

Gooseberry Howard's Lancer (G. Woodward).—A very fine green berry of moderate flavour (award of merit).

Pelargonium Endlicherianum (W. Bain).—A grand flower; the large flowers are bright rose with crimson markings. The plant is nearly 2 feet high, and quite hardy (award of merit).

Plum Early Yellow (J. Fraser).—When our reporter reached this exhibit he found an empty plate (first class certificate).

Sagittaria japonica fl.-pl. (J. Hudson).—Very handsome; the pure white double flowers are carried on a spike some 3 or 4 feet high (first-class certificate).

Sarracenia Dormeri (R. Veitch & Son).—A handsome plant. The basal colour is green and the venation gold (first-class certificate).

King's Norton, August 5th.

This exhibition was a record one. It was held in the spacious grounds of The Dell, belonging to G. E. Bellis, Esq. There was a large and excellent show of honey, of eight classes, which the judge (the Rev. E. Davenport) considered of very high character. In the open class, for a miscellaneous group of plants, arranged for effect, not exceeding a space of 12 feet by 6 feet, Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, was first; and Mr. Oliver Brasier, gardener to G. Martineau, Esq., Edgbaston, second. In the class for fine stove and greenhouse plants, distinct, Mr. J. Maldrem, gardener to George Cadbury, Esq., Northfield, won with good examples of *Clerodendron Balfouri*, *Pancratium fragrans*, *Stephanotis floribunda*, *Allamanda grandiflora*, two *Codiaeums*, and three Palms. For three ditto Mr. O. Brasier was first with a very good example of *Ixora Fraseri*, *Statice profusa*, and *Kentia Belmoreana*. For six Ferns, distinct, the first prize fell to Mr. J. Maldrem with well-grown and fine specimens of *Davallia Mooreana*, *Adiantum fragrantissimum*, *A. cuneatum*, *Dicksonia antarctica*, *Microlepia hirta cristata*, and *Adiantum gracillimum*. For three *Adiantums* very good specimens gained the first prize for Mr. T. Pass, gardener to W. Kentish, Esq. For three *Coleuses* Mr. J. Grantham, gardener to A. V. Hughes, Esq., took the first prize; the second falling to Mr. L. Arnold, gardener to W. E. Baker, Esq. For three single Zonal *Pelargoniums*, distinct, Mr. J. Maldrem was placed first, and Mr. L. Arnold second, both with good specimens. Three *Fuchsias* were fairly well staged respectively by Messrs. Maldrem, J. Grantham, and T. Pass; for a single specimen Mr. Maldrem was the only exhibitor with a very good example. *Coleuses* were generally richly coloured, the prizes being awarded in the following order to Messrs. J. Grantham, L. Arnold, and T. Pass. *Caladiums* were represented by one exhibit only, and the first prize was awarded to Mr. J. Maldrem. *Begonias* were creditably exhibited by Messrs. C. Butler, J. Maldrem, and L. Arnold. For three plants for dinner table decoration Messrs. T. Pass and J. Maldrem were the respective winners; and for six *Gloxinias* Mr. T. Pass was the solitary exhibitor with very good examples. Cut flowers were an attractive feature. For twelve Roses Messrs. R. Chatwin Cartwright and J. Grantham were placed first and second, whilst Mr. A. Duckworth and Mrs. Kershaw were adjudged equal third.

Hardy garden flowers, bright and tastefully staged, were shown by Messrs. Cartwright, F. Impey, and T. Pass, in merit as in the order named. Carnations and Picotees were very finely represented by Mr. R. C. Cartwright, as might have been expected, considering his fame as a Carnationist, and the first honours were accorded him for *Voltaire*, *The Gift*, *Duke of Alva*, *The Emperor*, *Hidalgo*, *Lady Bristol*, *Mrs. Hadley*, *Daniel Defoe*, *Heather Bell*, *Monarch*, *Goldyllocks*, and *Eldorado*, and, not for competition, a large and representative collection, which was responsible for a numerous recourse to note-books by intending growers and others; the second and third prizes falling to Mr. Thos. Grubb, gardener to W. W. Wiggin, Esq., and Mr. T. Pass, both with good examples. Fruit was sparsely shown in the open class, but more numerous in the amateur and cottager classes, space not allowing of details of the numerous prize exhibits. Messrs. Sutton and Sons, Reading, and Messrs. W. H. Simpson, Birmingham, offered valuable prizes for collections of vegetables; Messrs. Robert Sydenham and Messrs. Simpson for Sweet Peas; and Mr. W. B. Child, Acock's Green, for hardy perennials. A tent was provided for the exhibition of floral decorations for table centres, the successful competitors being Miss May Wolseley, Miss May Pope, Mrs. Ralph Yates, and Miss Pope, in the order named, and much taste was displayed by the fair disputants. The successful winners for honey were respectively Mr. W. H. Goodwin, Mr. A. Hutchinson, and Mr. J. Connor.

West Derby, August 5th.

There were over four hundred exhibits staged, the number of those exhibiting being over one hundred, so it may be readily imagined that the large marquee presented to visitors a picture of great beauty. At the main entrance the non-competitive stands were staged, the foremost being a brilliant collection of Carnations from Mr. C. A. Young. Messrs. Rowlands of West Derby had a good display of Cactus Dahlias in bunches, and other plants interspersed; and Mr. J. Skitt, gardener to Mrs. Bright, Knotty Ash, a choice and large collection of herbaceous flowers, and two of the best bunches of Black Hamburgs seen this season. Mr. F. Twist, gardener to Mrs. Hutchison, had extremely good pot Campanulas, and with the above named received certificates of merit. By far the most successful exhibitor was Mr. George Osborne, gardener to Dr. Duffus, Tuebrook. In the group class his work was seen to great advantage as regards colour and style. The twelve herbaceous, twelve Gladioli, and twelve Carnations and Picotees, three in a bunch, also from Mr. Osborne, were thoroughly well placed, and of first-rate quality. Mr. Henry Ogden's second prize group contained many good features. For four stove and greenhouse plants, Palms, and one foliage plant, the latter a handsome pyramid Croton of good colour, Mr. Osborne again carried the sway, as he did with twelve varieties of vegetables, the six class being won by Mr. W. Cross. Roses and Sweet Peas were poor; the Cactus Dahlias from Mr. Eastaff, gardener to G. Layton, Esq., being bright and fresh.

Fruit classes were absolutely perfect. The six dishes from Mr. W. Cross, gardener to Mrs. Wright, contained good Black Hamburgs, richly coloured Buckland Sweetwater Grapes, and fine Nectarines. Shapely bunches of Muscat of Alexandria won the class for white Grapes for Mr. Gaunt, gardener to S. Walker, Esq.; Mr. Cross showing again the best of Bucklands, second, and winning with six capital dishes of hardy fruit.—R. P. R.

Acock's Green, August 5th and 6th.

Undoubtedly the eleventh exhibition of this flourishing society eclipsed all previous ones, there being brought together a collection of plants, cut blooms, and vegetables which would have done credit to any society. Arranged in the principal marquee, upwards of 200 feet in length, the numerous exhibits of groups of plants presented a galaxy of floral beauty. The coveted honours were appropriated by the irrepressible Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, with one of the most artistic arrangements he has yet produced in the Midlands, a pleasing feature being the distinctive variations in his several efforts, thus avoiding a semblance of monotony that many exhibitors would do well to imitate. The second honours were deservedly adjudged Mr. Alfred Cryer, gardener to J. A. Kenrick, Esq., Berrow Court, Edgbaston, for a brilliant and tastefully disposed arrangement; the third position by Mr. George Hancocks, West Bromwich; and the fourth by Mr. F. C. Brookes, gardener to W. Waters, Esq., Acock's Green. Zonal Pelargoniums, which usually form one of the leading features here, were well shown by Mr. J. Freeman, gardener to Zaccheus Walker, Esq., and by Mr. Cryer. Fuchsias were very well represented by Messrs. G. Hancox, G. F. Wright, and A. Cryer. Exotic Ferns were grandly shown respectively by Messrs. J. V. Macdonald and A. Cryer. Coleuses, which are usually so well shown here, were sustained by the exhibits of Messrs. A. Cryer, Z. Walker, and R. Llewellyn. Cactus Dahlias made a pleasing feature, the prizes going respectively to Messrs. J. Child, Mrs. Edmondson, and Mr. W. B. Child. Hardy perennials were capitally shown by Messrs. Z. Walker and W. Waters. Roses, considering the lateness of the season, were respectably shown by Mr. E. Neale, gardener to J. W. Lill, Esq., Solihull; Mrs. Edmondson, and Mr. W. Moseley. Violas held their own by Mrs. Edmondson, Mr. W. Parlett, and Mr. H. Turner, gardener to W. J. Holmes, Esq. Sweet Peas were capitally staged by Messrs. E. Neale, W. Moseley, W. Staples, and W. H. Edwards, in order named.

Vegetables were again in evidence, both in quantity and quality, with, for collections, Mr. S. Rison, Mr. A. Cryer, and Mr. W. Moseley as the respective winners for the prizes offered by Messrs. Thomson and Co., Birmingham; and Mr. T. Perry, gardener to A. H. Foster, Esq., Hall Green, secured Messrs. Webb & Sons, Wordsley, prizes. Mrs. Edmondson, Messrs. G. L. Wright and G. Hancox were the winners for collections of fruit. For black Grapes, Mrs. Edmondson and Mr. H. Dix, gardener to A. F. Bird, Esq., were first and second respectively; the same order being maintained for white Grapes.

The strictly open local classes were strongly represented, and for which space precludes a detailed description; excepting, however, special mention may be made of the floral dinner-table decorations, which were unusually good. It was gratifying to observe that Mrs. Issett, who had repeatedly striven to obtain a first prize in this line, was at last deservedly awarded such for a very tastefully arranged exhibit of Sweet Peas, Fern fronds, and sprays of Selaginella. Miss Grace Smith second with a composition of Sweet Peas and Fern fronds; third, Miss Langley; and fourth, Miss Gibbert. Silver-gilt medals and first-class certificates were awarded to Mr. W. B. Child for a grand collection of

hardy herbaceous flowers; to Messrs. Thomson & Sons, Birmingham, for a collection of plants and Carnations; to Mr. G. Price, Acock's Green, for a collection of plants; to Councillor W. Walters for a fine collection of Violas; to Messrs. Hewitt & Co., Birmingham, for a collection of cut hardy perennials; and to Messrs. Kelway & Son, Somerset, for Gladioli. Bronze medals were awarded to The Vineries Co., Ltd., Acock's Green, for a collection of plants and Tomatoes; and to G. F. Spittle, Esq., Solihull, for a collection of Carnations. Mr. E. Pett, Acock's Green, was awarded a certificate of merit for a fresh-looking and useful collection of miscellaneous plants and a tastefully made floral anchor. Much credit is due to the energetic secretary, Mr. W. B. Child, and the competent committee.

Castleford, August 5th and 6th.

The annual show of the above society took place this year on Monday and Tuesday, August 5th and 6th. The committee of the above show is to be congratulated on the high quality their show has now attained. Having been a constant attendant for several years past, I have no hesitation in saying the quality and quantity of exhibits have rarely ever been surpassed. The freshness of the exhibits, after the torrid month of July, astonished very many visitors. This year the weather has proved favourable for the show, and I hope the hard-worked committee will have a good balance on the right side. It will be remembered by some the disastrous weather which occurred last year during the holding of the show, which naturally caused a great falling off in the takings, and which compelled the society to draw largely on its reserves. The first which attracts attention on entering the spacious tent are the groups and specimen plants, all of which are creditable examples of cultivation. Fruit was about the average, Grapes and Tomatoes being very good; the vegetables good for the season. The following are the principal prizewinners.

Twelve stove or greenhouse plants, six to be in bloom.—First, Messrs. R. Simpson & Son, Selby; second, Mr. J. S. Sharp, Almondsbury; third, Mr. J. Sunley, South Milford. Group of miscellaneous plants arranged for effect.—First, Mr. J. S. Sharp; second, Mr. J. Blacker, Selby; third, Messrs. R. Simpson & Son. Six stove or greenhouse plants.—First, Messrs. R. Simpson & Son; second, Mr. J. S. Sharp; third, Mr. J. Sunley. Four Crotons.—First, Messrs. R. Simpson & Son; second, Mr. J. S. Sharp; third, Mr. J. Blacker. Six Ferns.—First, Messrs. R. Simpson & Son; second, Mr. J. S. Sharp; third, Mr. J. Sunley. Six Fuchsias.—First, Mr. J. G. Brown, Outwood; second, Messrs. J. & R. Calam, Wakefield; third, Messrs. R. Simpson and Son. Six Geraniums.—First, Messrs. R. Simpson & Son; second, Mr. J. Blacker; third, Mr. J. Sunley. Six pots, Lilliums.—First, Mr. J. Blacker; second, Messrs. R. Simpson & Son; third, Mr. J. Sunley. Six table plants.—First, Mr. J. Blacker; second, Messrs. R. Simpson and Son; third, Mr. J. R. Groundwell, Leeds. Group of Begonias.—First, Messrs. R. Simpson & Son; second, Mr. J. Blacker. Group of Gloxinias.—First, Messrs. R. Simpson & Son; second, Mr. J. Sunley; third, Mr. A. Sunley.

CUT BLOOMS.—Thirty-six Roses.—First, Messrs. J. & R. Calam; second, Mr. R. Park, Bedale; third, Mr. W. Robinson, Bramham. Twelve Roses.—First, Messrs. J. & R. Calam; third, Mr. R. Park. Twelve Teas or Hybrid Teas.—First, Mr. R. Park; second, Messrs. J. and R. Calam; third, Messrs. May Bros. One bouquet.—First, Mr. J. R. Groundwell; second, Messrs. J. & R. Calam. One wreath.—First, Messrs. J. & R. Calam; second, Mr. J. R. Groundwell. One bouquet, trade excluded.—First, Mr. C. H. Simpson, Ackworth; second, Mr. C. Smith, Leeds. One bouquet, white Roses.—First, Messrs. J. and R. Calam; second, Mr. J. G. Brown; third, Mr. J. R. Groundwell. Six buttonholes.—First, J. R. Groundwell. Three lady's sprays.—First, Mr. J. R. Groundwell. Twelve bunches hardy cut flowers.—First, Mr. J. R. Groundwell; second, Mrs. Few, Carleton. Twelve bunches greenhouse flowers.—First, Mr. J. R. Groundwell; second, Mrs. Few. Twelve bunches Sweet Peas.—First, Mr. J. R. Groundwell; second, Messrs. W. & J. Hewson, Cutsyke. Twelve Show Dahlias.—First, Mr. J. W. Hague, Crossgates; second, Messrs. W. & J. Hewson. Twelve Dahlias, Cactus.—First, Mr. J. W. Hague; second, Mr. J. R. Groundwell. Six Stocks.—First, Messrs. W. & J. Hewson. Six Asters.—First, Mr. G. Fewsdale. Six Marigolds, French.—First, Mr. J. R. Groundwell; Six African.—First, Mr. J. R. Groundwell. Twelve Pansies.—First, Mr. C. H. Simpson; third, Mr. D. Wilson.

FRUIT.—Tray of fruit, eight kinds.—First, Lady Beaumont; second, Earl of Londesborough; third, Thomas Hague, Carleton. Two bunches black Grapes.—First, Lady Beaumont; second, Mr. T. Hague; third, Earl of Londesborough. Two bunches white.—First, Earl of Londesborough; second, Lady Beaumont; third, Mr. T. Hague. Six Peaches.—First, Lady Beaumont; second, Mr. T. Hague; third, Mrs. Few. Six Nectarines.—First, Lady Beaumont; second, Earl of Londesborough; third, Mr. T. Hague. Small fruits were fairly well represented. Tray of vegetables.—First, Lady Beaumont; second, Mr. J. R. Groundwell; third, Mr. T. Hague. Twelve Tomatoes.—First, Lady Beaumont; second, Mr. T. Hague; third, Mr. G. Fewsdale. Other vegetables in season were numerous shown, both by gardeners, amateurs, and cottagers, some of the latter exhibits being particularly good.—J. E.

Abbey Park, Leicester, August 6th and 7th

This took place on August 6th and 7th, and it is an immensely popular one, like Shrewsbury and Hanley. It is a peculiar institution in that it is managed by a committee composed entirely of members of the Municipal Corporation. Any proceeds derived after the payment of expenses is devoted to the beautifying the public parks, of which there are four in this large town; if, on the other hand, there is a deficit it is borne by members of the committee. The Corporation of the borough is thus closely identified with the show, and there is always an opening ceremonial, in which the Mayor and Mayoress take part. The secretary is Mr. John Bury, the curator of the Abbey Park, and thus the venture is wholly in the hands of the Corporation and its officials. The Abbey Park is well adapted for the purpose of a flower show. There are broad stretches of turf upon which the tents can be erected, and all round about there is a charming flower garden. Despite the drought, which has been severely felt at Leicester, the floral arrangements in the park, and the excellent condition in which everything is kept, does the park committee and their curator the greatest credit. There are bold and striking patches of sub-tropical gardening; the Leicester folk look on to the huge Agaves which are planted out with great wonder. A large circular bed of Rhododendrons, among which are to be seen a very fine lot of herbaceous Phloxes, occupying the centre of a junction of three main roads, is one of the features in the park. Away towards the centre there is a very large piece of flower garden, and though the old-fashioned bedding plants are used the garden is admirably furnished, and it is a source of very great attraction to the townspeople. There were six large marquees, and they were all well filled; in addition one if not two of the large plant houses had to be cleared out in order to accommodate the children's exhibits, which were very numerous. There was a very large display of cottagers' vegetables.

The plant classes at Leicester calculated to bring large specimens are few. Mr. H. Blakeway, gardener to P. H. Muntz, Esq., M.P., Rugby; Mr. W. Vause, Leamington; and Mr. W. Finch, Coventry, sent Palms, Crotons, Allamandas, Statice, &c., and these formed the bulk of the plants. Groups, arranged for effect on a space of 160 superficial feet, were a great feature, and as Mr. J. Cypher of Cheltenham exhibited last year and took the first prizes, his artistic method, seen in Leicester for the first time, caught on. Every group competing with his this year—five, making six in all—were arranged in the same style; they filled the middle of a large tent, and made the most striking feature in the whole exhibition. Mr. Thompson, gardener to J. W. Turner, Esq., Littleover, near Derby, came nearest to Mr. Cypher, and his group made a very attractive second. Specimen plants were few. Mr. W. Vause, Leamington, had the best six—Palms, Crotons, Allamandas, Statice profusa, &c., the most prominent.

The Abbey Park flower show is made up very largely of cut flowers; the Carnation and Picotee are always a leading feature. There are a great many keen florists in the town. As it was late for southern Roses, the battle for the leading honours was between Messrs. D. & W. Croll, Dundee, and Messrs. A. Dickson & Sons, Newtownards, Belfast. If one of these came in first with thirty-six, the other was first with twenty-four varieties, they may be said to have fairly divided the honours. The best twelve H.P.'s, one variety, resulted in a tie, Messrs. Dickson & Sons with J. S. Mill, Messrs. Croll with Alfred Colomb. The best twelve blooms of one variety of Tea-scented was Luciole, from Messrs. Croll.

The Birmingham growers of Carnations and Picotees generally win in the open classes, and Mr. R. C. Cartwright, who scored so favourably at Edgbaston the previous week, may be said to have carried all before him; his selfs, yellow grounds, and Fancies were particularly good. Messrs. Artindale & Co., Sheffield, and Mr. A. R. Brown, Handsworth, also scored leading second prizes. The amateur element competed largely, and showed, for the season, very good blooms.

The only exhibitor in the class for a large collection of hardy herbaceous and bulbous plants were Messrs. Harkness & Sons, Bedale and Hitchin, who had grand bunches effectively displayed. They were awarded a special medal in addition to the first prizes. Double and single Begonias, as cut blooms, were finely shown by Messrs. B. R. Davis & Sons, Yeovil. Hardy annuals were an interesting feature. There were very good Cactus Dahlias, as well as Show and Fancy types; and the collections of twelve bunches of Sweet Peas found many admirers. But the classes for cut blooms were very numerous, and only some of the leading ones can be noticed. In the amateurs' division for Roses Messrs. W. Boyes of Derby and M. Whittle of Leicester secured the leading prizes. There were charming bouquets and delightful baskets of flowers, with sprays and buttonholes also, and they occupied a good space of tabling.

Some very good fruit was staged, the principal prizewinner being Mr. J. H. Goodacre of Elvaston Castle Gardens. He was first in the collection for eight dishes, including three varieties of Grapes and a Pine; and also with eight dishes, two varieties of Grapes only, and no Pine. Muscat Hamburgh, Black Hamburgh, and Muscat of Alexandria Grapes were finely shown in the first class, and Muscat of Alexandria and Muscat Hamburgh in the second. Peaches and Nectarines were also very good. Mr. A. McCulloch, Newstead Abbey

Gardens, was second in one class, and Mr. J. Read, Bretby Park Gardens, in the other. With four varieties of Grapes, two bunches of each, Mr. Goodacre romped in first with well finished examples of Madresfield Court, Muscat Hamburgh, Gros Maroc, and Muscat of Alexandria; Mr. A. McCulloch was second. Mr. Goodacre was first with two bunches of Black Hamburgh, also with two bunches of White Muscats and two bunches of any other black, having Gros Maroc, but the judges would not accept his Canon Hall Muscats in the class for white, with Muscat of Alexandria excluded. Peaches, Nectarines, and Melons, were shown in good character.

Vegetables were very numerous. As they are largely grown in the allotment gardens about Leicester they appear in many classes. Messrs. Sutton & Sons, Harrison & Sons, and other local seed merchants, offered special prizes for vegetables, and these contributions greatly helped to swell the total. The competition was very keen throughout.

The trade was largely represented by miscellaneous exhibits. The London division was represented by Messrs. Veitch & Sons, J. Peed and Son, B. S. Williams & Son, and A. Perry of Winchmore Hill, all of whom had very interesting exhibits. From the provinces came Messrs. J. H. White & Son, Worcester; Clibran & Son, Altrincham; B. R. Davis & Sons, Yeovil; H. Deverill, Banbury; Harrison & Son, Leicester; Jones & Son, Shrewsbury; Hinton Bros., Warwick; S. Mortimer, Farnham; and several others, enough to constitute a good sized exhibition in the form of non-competitive exhibits.

Malton, Yorks, August 7th.

This society held its annual show on Wednesday, August 7th, in the Orchard Field. The weather at the beginning of the day looked anything but promising, but only slight showers of rain fell before noon. The afternoon was fine with a comfortable temperature, and there was a record attendance. The entries were in excess of last year, especially in the plant classes. The cut flowers were good, especially Roses and Sweet Peas. Hothouse fruit was well shown, but hardy fruit was below the average. We regret to notice that very few plants had names attached to them, although in one of the rules in schedule we read:—"The plants to be legibly named, so that visitors can read them." Flower shows lose a great deal of their educational value when the exhibits are not named. We would like to see this rule enforced by the Malton committee.

PLANTS.—The most important class was for six stove or greenhouse plants in bloom, for which prizes of £5, £2 10s., and £1 10s. were offered. Mrs. Kitchen of Darlington (gardener, Mr. Suffield) staged nice even plants, amongst which we noticed *Dipladenia amabilis*, *Clerodendron Balfouriana*, *Stephanotis floribunda*; a *Statice* was a weak point in this collection. Messrs. Simpson & Sons, Selby, were second with rather finely flowered specimens. Mrs. Kitchen was also first for three ditto, and Messrs. Simpson & Sons second. The latter exhibitors were to the front for a single specimen, Mrs. Wise, Auburn Hall, second. Messrs. Simpson & Sons had the best six ornamental or fine-foliage plants, with Palms, Crotons, *Dracenas*, &c.; Mrs. Kitchen second. Four very good exotic Ferns were set up by Messrs. Simpson and Sons, with Mrs. Kitchen again second. The latter, however, was first for three British Ferns, and Mr. J. Ellerker, Kirbymoorside, second. *Fuchsias*, *Geraniums*, *Liliums*, &c., were well represented, and the prizes taken principally by residents in Malton. For six plants for dinner table decoration, adornment allowed, Mrs. Kitchen was first with graceful plants, Messrs. G. Longster & Sons second, Messrs. Simpson and Sons third. For three ditto, the same exhibitors carried off the prizes in the same order.

CUT FLOWERS.—For twenty-four Show Dahlias Messrs. Clark and Son, Rodley, were the only exhibitors, and were awarded first prize; their stand contained some good blooms. They were also first for twelve Show, twelve Fancy, as well as for six Cactus and single blooms. Mr. J. D. Hutchinson set up six capital spikes of *Gladiolus*, Messrs. Harkness & Son, Bedale, being second. The twelve best Carnations came from Miss Duncombe, Nawton; Messrs. Clark & Sons, second; Hon. G. N. Dawnay, Malton, third. For twelve Picotees Messrs. Clark and Sons were placed first, followed by Messrs. Harkness & Son. The latter firm were to the front with Roses, being first for six distinct varieties, three blooms of each, with Mrs. J. Laing, Exposition de Brie, Bessie Brown, Madame Haussman, White Maman Cochet, and Alfred Colomb. They were again first for twelve blooms, staging *Clio*, Horace Vernet, Maman Cochet, Duc de Rohan, Tom Wood, Paul Neyron, Comtesse de Ludre, Ulrich Brunner, Bladud, M. S. Rhodocanachi, Pierre Notting, and Marquise Litta. Mr. J. D. Hutchinson was second in both these classes with fair blooms, and Mr. R. Dobson, Marton, third. Mr. Hutchinson was first for six Tea Roses, Harkness & Son second. Mr. G. Cottam had the most tastefully arranged basket of cut Roses, mostly yellow, white, and pink blooms. Messrs. Harkness and Son second with a rather stiff arrangement; Mr. R. H. Wiles third.

For a collection of four varieties of fruit, one variety of Grapes only allowed, Mr. McPherson, gardener to the Earl of Londesborough, was a good first with Muscat of Alexandria Grapes, Peaches, Melon, and a Pine; T. Hagne, Esq., Selby, second with Black Hamburgh Grapes, Peaches, Nectarines, and a Melon; Mr. J. S. Upex, gardener to the Hon. H. W. Fitzwilliam, third, staging Black Hamburgh Grapes,

Pitmaston Orange Nectarine, Brown Turkey Figs, and Stirling Castle Peach. T. Hague, Esq., had the three best bunches of black Grapes, three good bunches of Madresfield Court; Messrs. G. Longster & Sons second, Mr. McPherson third. In the corresponding class for white Grapes the last named exhibitor won with good bunches of Muscat of Alexandria; T. Hague, Esq., second with the same variety, and Mr. J. S. Upex third with Foster's Seedling. For Melons Mr. McPherson was first; C. Cammell, Esq., Hutton Hall, second; T. Hague, Esq., third. J. Hugill, Esq., had the best Apricots, C. Cammell, Esq., second. Mr. McPherson was first for Peaches, T. Hague, Esq., second. The same exhibitors took the prizes for Nectarines in reversed order. Vegetables were good, especially Onions and Carrots.

Bridgwater, August 8th.

The sixth annual show of this West Country town was held under very favourable conditions as regards weather, and fortunately for the executive the attendance was larger than in any previous year. Though the prizes offered are small, the competition was in most instances keen, and the show on the whole was of good quality and variety. Groups of plants were all from local exhibitors, who, however, displayed artistic taste in the arrangement of a choice assortment of plants. Messrs. Hayward Bros. took first prize, Messrs. H. Corder and T. Foster Barham second and third prizes respectively. There was only one competitor for twelve stove and greenhouse plants, H. S. Baily, Esq., Glastonbury, who was awarded first prize, and the same exhibitor won with twelve Ferns. Zonal Pelargoniums were well staged by Messrs. Shepherd and H. Corder, and tuberous Begonias by Mr. C. N. Brameld and Mr. G. Lovibond. The first-named also won with Coleus, and three pots of Lilies. Mr. R. Y. Foley showed the best Gloxinias and hanging plant in basket, and Mr. E. W. Hill the best Petnnias.

Cut flowers brought out a stronger entry. A collection of herbaceous perennials made an interesting display, Mr. A. A. Walters, Bath, showing well for first place; Mr. H. Corder, Bridgwater, second. Messrs. Jarman & Co., Chard, winning with twelve varieties of similar flowers; Mr. T. Knapman, Exeter, second. The same firm won with Cactns Dahlias in twelve varieties, and twelve varieties of stove and greenhouse flowers. The best box of Carnations arranged for effect came from Messrs. W. Taplin & Sons, Newton Abbot. The best Asters were from local growers, though the competition included growers from Bath and other distant gardens, and the same may be said of Sweet Peas. Mr. A. H. Newman of Bath won with twelve varieties of annuals, and Mr. G. Humphries, Chippenham, staged handsome Gladiolus, Mr. S. Tottle of Taunton coming second. With eighteen Roses, distinct, Messrs. Perkins, Coventry, were first; Messrs. Jarman, second; and Mr. A. A. Walters, Bath, third. For a dinner table decoration without fruit, Messrs. Perkins won easily with very choice Orchids tastefully set up; Mr. T. Foster Barham and Miss Lilian Hill following. Messrs. Perkins and A. H. Newman secured the prizes for bouquets, and the Coventry florists were again first for six buttonhole bouquets in their well known style.

For a collection of six dishes of dessert fruits, Col. Vivian, Rood Aston, was a good first, Messrs. W. Brice and F. J. C. Parsons second and third respectively, the first named winning with three bunches of black Grapes; Messrs. L. R. Price, Yatton, and H. S. Baily staged the best white Grapes. Out of several exhibits of Melons, the judges took the extraordinary course of cutting the two largest only, and giving these the prizes, without ascertaining the comparative qualities of other good fruit staged. Messrs. Hayward Bros. and Col. Vivian won with Nectarines, and Mr. F. J. Sheere, Bridgwater, secured the first prize for a dish of Plums, and also Pears and cooking Apples. These and dessert kinds were numerous shown, and the quality of the whole was very fine. Cottagers, too, staged in fine form, Beauty of Bath being almost exclusively exhibited as dessert. Vegetables, considering the nature of the season, were fine, and the competition keen. Messrs. G. Garaway, Bath; B. C. Shepherd, S. Jennings, E. W. Hill, T. Foster Barham, Parsons, F. J. Sheere, and Miss Foster, being the foremost exhibitors. In the amateurs' section the honorary secretary, Brian Norris, Esq., was a successful competitor.

Harborne Gooseberry Show, August 10th.

Owing to intermittent hot weather and rain during the last fortnight prior to the show in hastening the ripening and consequent bursting of a large proportion of some of the finest berries of the growers, fears were anticipated that there would be a material falling off in the number of entries as well as the weight and quality of the berries. Such fears, however, so far as the show was concerned, were agreeably ignored, especially in regard to the average weight of the fruits *in toto*; and in comparison with the weight of the premier berry of 1900 (Mr. W. James' Surprise, a green variety, 24dwts. 10grs.), Mr. E. Withers' Transparent, a white variety, bumped the scales at 28dwts., while, by the way, his premier berry's (Ringer) specific gravity was so dense at the recent show at Stone as beat it by a few grains. What tempting lumps of "saccharinaceous pabulum" those gigantic spheres of this popular fruit appeared to be. The Harborne Gooseberry Society has now completed its eighty-seventh annual show, and how few societies

horticultural can boast of an octogenarian show. Mr. Edward Boraston, for many years the much respected secretary and successful exhibitor owing to a change of residence to another district, has resigned the secretaryship, likewise as an exhibitor for the time being, and the post of secretary has been undertaken by Mr. George Stacey, who is also an exhibitor, as will be seen by the prize list.

Premier Prize.—Mr. E. Withers, Transparent, 28dwts. Twin Berries.—First, Mr. E. Withers, Ringer, 40dwts. 20grs.; second, Mr. T. Richards, Fascination, 33dwts. 15grs.; third, Mr. W. Higham, Fascination, 33dwts. 8grs.

CLASS PRIZES.—*Red berries*.—First, Mr. E. Withers, Bobby, 26dwts. 16grs.; second, Mr. J. Hobday, Lord Derby, 24dwts. 12grs.; third, Mr. W. James, Dan's Mistake, 22dwts. 8grs.; fourth, Mr. W. Higham, Blucher, 21dwts.; fifth, Mr. G. Pettitt, London, 17dwts. 4grs.; sixth, Mr. T. Richards, Falstaff, 16dwts. 12grs. *Yellow berries*.—First, Mr. E. Withers, Ringer, 25dwts. 16grs.; second, Mr. W. James, Leveller, 22dwts. 16grs.; third, Mr. W. Higham, High Sherriff, 22dwts. 8grs.; fourth, Mr. G. Stacey, Thatcher, 21dwts. 8grs.; fifth, Mr. G. Hobday, Mount Pleasant, 18dwts. 8grs.; sixth, Mr. G. Cash, Garibaldi, 15dwts. 20grs. *Green berries*.—First, Mr. T. Careless, British Oak, 21dwts. 12grs.; second, Mr. E. Withers, Surprise, 20dwts. 8grs.; third, Mr. W. James, Stockwell, 18dwts. 4grs.; fourth, Mr. T. Richards, Shiner, 18dwts. 20grs.; fifth, Mr. G. Stacey, Telegraph, 16dwts. 8grs.; sixth, Mr. G. Hobday, Diadem, 12dwts. 20grs. *White berries*.—First, Mr. E. Withers, Transparent, 27dwts. 12grs.; second, Mr. G. Hobday, Faithful, 21dwts. 12grs.; third, Mr. W. Parsons, Miss Chesters, 19dwts. 16grs.; fourth, Mr. W. James, Careless, 19dwts. 12grs.; fifth, Mr. G. Stacey, Princess Royal, 19dwts.; sixth, Mr. Chamberlain, Fascination, 17dwts. 20grs.

EXTRA SPECIAL PRIZES FOR TWELVE BERRIES OF ANY VARIETY.—First, Mr. E. Withers, 301dwts. 12grs.; second, Mr. W. James, 249dwts.; third, Mr. G. Stacey, 240dwts. *Red berries*.—First, Mr. E. Withers, Bobby, 304dwts.; second, Mr. W. James, Lord Derby, 224dwts.; third, Mr. T. Richards, Bobby, 210dwts. *Green berries*.—First, Mr. T. Careless, British Oak, 224dwts. 12grs.; second, Mr. W. James, Surprise, 222dwts. 12grs.; third, Mr. E. Withers, Surprise, 214dwts. *Yellow berries*.—First, E. Withers, Leveller, 298dwts. 12grs.; second, Mr. W. James, Leveller, 245dwts.; third, Mr. D. Richards, Leveller, 230dwts. *White berries*.—First, Mr. E. Withers, Transparent, 260dwts.; second, Mr. T. Richards, Fascination, 190dwts.; third, Mr. G. Warren, Fascination, 178dwts. 12grs. *Best beaten berry*.—Mr. E. Withers with Ringer, 27dwts. 12grs.

In addition to the foregoing classes four prizes were awarded to exhibitors of three berries, Mr. E. Withers leading with Dan's Mistake, Ringer, and Transparent. Prizes were awarded to six exhibitors of two berries, prizes to five exhibitors of one berry, and extra money prizes to thirteen exhibitors of two varieties. The show, which extended to four days, was, as usual, held in the club room of the old hostelry, The Green Man.

Sefton Park Amateur Gardeners', August 10th.

The tenth annual exhibition of the above Association was opened near the Ullet Road entrance to Sefton Park on Saturday last, and continued again on Monday. The weather was most unpropitious, and told greatly against the attendance. Apart from the two handsome groups of miscellaneous and foliage plants kindly sent, not for competition, by A. A. Paton, Esq., Greenbank Drive, and Messrs. R. P. Ker & Sons, the show was strictly amateur, Palms, Ferns, Fuchsias, Lilliums, Aspidistras, and a host of other plants showing the wonderful amount of attention that must have been expended to gain the perfection attained. I was particularly pleased with a small but lovely hanging basket of Mr. Jarvis, suspended from triangular bamboos, in which the daintiest of trailing plants, plain and ornamental, were just at their best. Mrs. Stevenson of Pembroke Place, Liverpool, gained a well deserved honour for the best small garden, on the roof of her house. Mr. W. Forrest, the secretary, figured in many classes. Instead of the usual money prizes, many useful and valuable articles are offered, thus proving a strong inducement to many.—R. P. R.

Scottish Horticultural Association.

The monthly meeting of the Scottish Horticultural Association was held at 5, St. Andrew Square, Edinburgh, last week, Mr. Comfort, Broomfield, Davidson's Mains, presiding. "Judging at Country Shows" was the subject of debate, and, in introducing it, Mr. Bird, Raehills, Dumfriesshire, in a racy manner spoke of the work of a judge, and of the points he ought to take into consideration in judging the exhibits in the various departments of a show. He advised all judges to carry spring balances with them, and to use these in finding the weight of articles instead of deciding with the eyes. He also counselled them to look very carefully through the rules and regulations distinctly laid down in the catalogue of the society whose show they were to judge; to pay very little attention to the remarks of attending members of committee before they gave their awards, because many of these gentleman had a little interest in some of the articles staged; if a difference took place to call in a third party; and to avoid openly criticising their fellow judges' opinions. A discussion followed, at the close of which Mr. Bird was heartily thanked for his remarks. A number of exhibits were laid on the table and examined.



Fruit Forcing.

Cucumbers.—Old plants, whether in houses, pits, or frames, which have been bearing from an early part of the season, produce fruit about this time or soon afterwards, knobby ended, and, essential as these are for seed, they are indifferent for use. Besides, seed bearing is fatal to the production in quantity of useful fruit. Old plants, however, may be kept in a bearing condition by cutting out the old growths and encouraging young, so as to insure a succession of bearing wood, yet the fruit is more or less liable to become knobbed. Train the young growths thinly, removing old leaves to afford room for new growths, and stop at one or two joints beyond the fruit. Remove the surface soil where it can be done without injury to the roots, and supply fresh lumpy loam. Plants in frames that have been bearing some time will be restored to vigour by a free thinning out of the old growths and the addition of a little fresh loam, giving a moderate watering and a sprinkling over the foliage on bright afternoons, closing about 3 P.M. With linings to the sides of the beds, and the protection of mats over the lights when the nights become cold, Cucumbers will be produced for a lengthened period.

Autumn-fruiting Plants.—When a supply of Cucumbers is wanted in late summer and autumn, young plants afford them much better than old ones, either in frames or houses. Therefore the plants raised some time ago, and planted out, should be encouraged to make a strong growth by earthing the roots betimes, applying enough each time to cover those protruding, and taking care to have the soil moist and warm. Supply water to the roots only when wanted, and give a thorough supply each time. Syringe about 3 P.M., damping in the morning, at noon, and in the evening during bright weather. Maintain a night temperature of 65° to 70°, 70° to 75° by day artificially, 80° to 90° from sun heat, and close sufficiently early to rise to 90°, 95°, or even 100°. Train the growths rather thinly, allowing about 12 inches between the side growths, and stop them about every foot's growth to give the needful fruiting and furnishing shoots. Remove all fruits and male flowers as they show, so as to induce a sturdy habit, the beginning of September being sufficiently early to allow fruit to show for cutting at the end of the month, then by cropping lightly fruit will be had in full supply later on, when it is most wanted; the plants, however, will give fruit from the early part of September if desired, and not being overburdened, keep up a succession till the new year or longer. Avoid overfeeding, as it only induces fungoid diseases and favours root eelworm attacks. Secure plenty of roots by sweet compost, and sturdy growth by top-dressing of fertilisers, judicious ventilation, and full exposure of the foliage to the light.

Houses for Winter Fruit.—The structure must be light and efficiently heated both at top and bottom, and means of ventilation provided, so that air can be admitted without creating a prejudicial draught. The plants will have been raised from seed about the 10th of this month. Pot the plants as soon as ready, keep them near the glass, transfer into large pots as they require more root space, and place a small stick to each for support, growing the plants without stopping, but rubbing off side shoots as they appear to the height of the trellis. In the meanwhile, the house should be cleansed and repaired or painting completed. Remove all the old soil, and make everything as sweet as possible, so that the plants may have a chance. Winter Cucumber growing is much easier to write about than practise successfully.

Vines.—**Early Houses.**—Vines that have been forced to ripen their fruit in May and June have the wood ripe. Some of the old leaves may also have fallen, which are generally the first formed, as these, from their thin texture, are soonest exhausted in elaborative power. There are other causes for the leaves having died early, such as attacks of red spider, insufficient supplies of water, and lack of nourishment. These must be guarded against, but under the best of treatment some of the lower leaves fall early from no other cause than their thin texture, whilst the laterals, which are formed later, have stouter foliage. Such are useful in assimilating nutrient elements, some of which find their way to the leafless buds, as is seen in their plumping, and in the thickening of the adjacent wood. The laterals must not, therefore, be cut close in, as that would probably cause the principal buds to start, but remove the growths by degrees, deferring the final pruning until the early part of September.

Renovating the Borders of Early Houses.—When the Vines are weakly it is good practice to remove the surface soil down to the roots, taking the advantage of raising any that are deep, and laying them in fresh turfy loam nearer the surface. Good calcareous gravelly loam is the best, especially if of a somewhat iron nature, or one-sixth of lime rubbish may be added where lime and gritty matter is deficient and the soil heavy. If the soil be light and brashy, add a

sixth of clay marl dried and pounded. A twelfth part of wood ashes may be supplied with advantage, and where the soil is poor a fifth part of fresh horse droppings. Other fertilisers are best applied as surface dressings. Give a moderate watering; fresh roots will push, especially from near the collar, into the new soil at once, and be in capital condition to support a good start in the Vines when the time comes round. The border renovation, also lifting, should be performed whilst the leaves are on the Vines. If the weather is bright the house will need shading and keeping rather close and moist for a few days.

Midseason Houses.—The Vines have had plenty of sun this season, and have perfected or are ripening satisfactory crops. Where the Grapes are ripe air should be freely admitted, and enough afforded at night to insure a free circulation. If water is needed supply it early on days that promise to be fine, and with a free ventilation the moisture will not do any harm, but favour the keeping of the Grapes in a sound condition. A slight shade is necessary to prevent the sun taking the colour out of Black Hamburgs and other black Grapes, especially where the foliage is thin. Grapes commencing to colour need a circulation of air, enough at night to insure a change of atmosphere, a gentle warmth in the pipes often being necessary when the weather is cold or damp both day and night. Copious supplies of water and occasional applications of liquid manure will be needed until the Grapes are well advanced in colouring, and then the inside border may be mulched with short, dry, spent material.

Late Houses.—Full supplies of water and feeding at the surface are necessary until the Grapes are coloured up to the footstalk, for many late Grapes appear ripe when they are only partially finished. All late Grapes require time; they ought now to be colouring or advanced in that process, then, with a circulation of warm, rather dry air constantly, and a thoroughly moist condition of the soil, they will swell and finish well. The chief cause of Muscats shrivelling, even when they are unripe, is poverty; also of others shrinking after they have hung some time. Afford a temperature of 70° to 75° by day artificially, 80° to 90° with sun, and close sufficiently early to increase to 90° or 95°. When the sun is losing power, afford enough air to insure a circulation, and allow the temperature to increase to 90° or 95°. When the sun is losing power, afford enough air to insure a circulation, and allow the temperature to gradually cool, which prevents the moisture in the atmosphere depositing on the berries. The hot-water pipes should, if necessary, have a little warmth in them to prevent the night temperature falling below 65°. Give particular attention to the early ventilation of the house.—ST. ALBANS.

The Kitchen Garden.

Onions.—Seeds of a few varieties to stand the winter should now be sown. The Tripoli varieties are the best, including Lemon Rocca. Sow thinly in drills a foot apart, and with care in sowing but little thinning will be required until plants are drawn for spring planting. The main crop of Onions must now be hastened towards maturity. Should the tops be erect and green break them down.

Cauliflower.—Where the autumn sowing of Cauliflowers for next early summer use is practised the seed may now be sown on a sheltered border. Prick out some plants when large enough in the same border; and also where they can be sheltered with a frame.

Carrots.—A sowing made now in light, comparatively dry, but not rich soil, will grow to a fair size before winter, through which they may probably pass with safety and furnish useful roots in spring. Scarlet Intermediate and Model are good varieties, forming medium sized roots, which are better than the long varieties for this sowing.

Turnips.—It is desirable to make another small sowing of Turnips, even if the previous sowing is coming on all right. Chirk Castle Black Stone, being a good hardy variety, may be sown. Fairly rich ground and an open position should be selected. Good, well formed and useful roots largely depend on well developed foliage, which is not usually produced in a shady position.

Celery.—The Celery crop now demands considerable attention. The earliest rows, if required for use in September, must be finally earthed, though it is not necessary to give the final moulding up until three weeks before wanted for use. The rows of maincrop varieties will need a little more tying and earthing, previously soaking the roots well with liquid manure. Tie up the plants, and keep the soil away from the hearts. The latest rows should be ready for trimming, this consisting of removing the lower senseless leaves and suckers springing from the base. Weeds, too, in and on the sides of the trench ought to be pulled out. Give the rows a liberal soaking of manure water and a light dusting of soot before placing any soil round the plants. Grubs of the Celery fly attacking the leaves by burrowing between the tissues may be destroyed by crushing between the finger and thumb. Plants sufficiently moist at the roots and actively growing are not attacked so virulently as those partially starved by lack of food and moisture in the soil.

Lettuce.—The best varieties of Lettuce for sowing now are Brown Cos and Hardy Hammersmith. Young plants from previous sowings may, as soon as large enough, be thinned and planted out. Insert them 4 to 6 inches apart in rows a foot asunder.

Endive.—Thinnings of early sown rows may be transplanted 6 inches apart on a warm, sheltered, rich border. Should they progress well,

and require more space, it will be an easy matter to remove every other one. Another sowing may be made to furnish later plants, which will follow on in succession. Fully grown plants may be blanched ready for use by laying a slate over them.

Cabbage.—The earliest sown plants ought to be thinned before they become crowded. The best of those removed may be pricked out 4 inches apart on moderately firm ground, where they can strengthen their growth and multiply roots prior to the final planting.

Scarlet Runner Beans.—These are now in full and active bearing condition. Keep the pods freely picked off, and during dry periods maintain the soil moist. Dryness at the roots will, more than anything else, cause the flowers to drop. Liquid manure is beneficial.

Mushrooms.—Manure should be collected daily, and may consist of horse droppings more or less free from straw. Spread the manure out thinly in a shed until enough is obtained for forming a bed, when throw the whole together in a heap to ferment. Before fermentation is excessive turn the heap, placing the outside in the inside, and *vice versa*. After this heating and turning the material will be ready for forming into a bed, which must be made firmly, about 10 inches or a foot thick, in a cool shed.—LYMINGTON, HANTS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Layering Carnations (R. T.).—Almost immediately.

Propagating Rhus Cotinus (Arthur).—Layer the shoots at the present time, previously notching or tongneing them, and in due time they will emit roots.

Grapes Rusted (T. P.).—The berries of the Alicante are affected by rust, due to some injury to the cuticle or skin at an earlier stage, giving them a rusty appearance later on. It is caused whilst the skin is young and tender, about thinning time, and disfigures them even when ripe. Touching the berries with the hand, or even the hair of the head, will cause rust. But cold draughts of air are the chief cause of rust, late or imperfect ventilation on some bright morning whilst the internal atmosphere and even the berries are saturated with moisture, then admitting air so as to induce rapid evaporation, cold draughts, or currents of air. Rust may also arise from sulphur fumes given off from hot-water pipes coated with it, as sometimes done to destroy red spider. It may also arise from syringing the Vines with water containing iron or other substance of a corrosive nature, and it not unfrequently results from the use of an insecticide, especially where the berries abut on each other and the solution remains there longest, and thus injures the cuticle or skin. This is very pronounced in the case of the berries of Muscats. The injury to the leaves appears that of scorching, there not being any traces of disease, yet some of the shanks of berries are withered up, as if they had been shanked. The only preventive is earlier and more judicious ventilation, with the avoidance of treatment and substances calculated to injure the cuticle or skin of the berries.

Grapes at a Standstill (H. Y.).—Yes, the berries are at a standstill, and this is occasioned by shanking, the term applied to denote the drying or withering up of the stalks of the bunches and berries of Grapes. The berries that thus shank, or lose the vitality of their stalks, never colour properly nor ripen, but become intensely sonr. In many cases all that the eye can detect is a minute black speck or a ring round the stem or stalk of the berry; in other cases the whole stem is quite blackened. The period when shanking commences is just as the berries begin to change colour or to ripen, and it continues more or less in action until they are ripe. The berries beyond the point of shanking cease swelling, because the supplies of sap are cut off. The chief cause of shanking is a bad condition of the roots of the Vines, they getting into a cold subsoil, or the border becoming soddened and sour, whereby the young rootlets of the main roots are destroyed. Where the roots are at fault, either through being in a border which is too rich or too wet and sour, the only remedy that can be adopted is to take the Vines up carefully and renew the border, taking care, if in a low or damp locality, to introduce a greater proportion of porous materials than before, so as to secure free percolation of water through the soil, and its departure in excess of the retentive power, by the provision of ample drainage material, with a drain or drains to carry off superfluous water, and then to replant them; this is perhaps best done when the leaves are falling, laying the roots in the top foot of soil.

Vegetable Marrows in Market Gardens (A. L. F.).—Stable manure is placed in holes made to receive it. Two plants are placed in each station. Sometimes cow and horse manure are mixed.

Correction (Reader).—In our foot-note answering your query as to the height of Jericho, we stated that it stands 700 feet above sea-level. This should have read, "700 feet beneath the level of the Mediterranean." We have not heard from the writer of the article entitled "Tropic Fruits."

Destroying Wireworm (M. D.).—Dress the ground with gas lime, 1 peck (level measure) per square rod, distributing equally over the surface, it being best applied in autumn and forked in. The ground should be again forked over in spring, so soon as it is in a fit condition, and again before putting in the crop. The lime may drive them away, if it does not destroy them. Many may be trapped by pieces of Carrot being placed into the ground and spots taken note of. They may be removed occasionally and the wireworms shaken into a pail of very hot water.

Affection of Peach Leaves (Novice).—The leaves are affected by the mite commonly called red spider, and technically termed *Tetranychus telarius*. It sucks the juices of the leaves, causing the whitish specks on the surface, and as the mites increase in numbers, and by their continual feeding, the affection spreads over the whole of a leaf or leaves, so that the tissues are deprived of the juices and the tree suffers in consequence, the leaves becoming sere and falling prematurely. The trees should have been forcibly syringed in the morning and afternoon of fine days, about 7 A.M. and 5 P.M. at this time of year, so as to forcibly eject the red spider and prevent its webbing over the affected part, or break up the web where formed. Thus the red spider cannot obtain a hold on the leafage, or, if securing one, retain it for long, hence it cannot increase on the foliage and deposit eggs. As the leaves are not badly infested, a few forcible syringings would cleanse the tree or trees to a great extent of the pests, this being the proper course to pursue at the present time, especially where there is fruit advanced in swelling and nearing the ripening stage, as an insecticide would probably affect the fruit prejudicially. It is important, however, that the red spider be destroyed, therefore an insecticide may be needed, and paraffin emulsion is very effective against it. The emulsion is readily made by dissolving 1 quart of softsoap in 2 quarts of boiling soft water, then removing from the fire, and while still boiling hot, adding one pint of paraffin oil, and immediately churning the mixture with a small hand syringe, so as to form a cream or emulsion, about five minutes' churning being needed to effect a perfect amalgamation. Of this emulsion 4 to 8 ozs. may be used to 3 gallons of water, adding $\frac{1}{2}$ to 1 oz. of liver of sulphur. The affected trees should, before the fruit ripens, be treated with the weaker solution, and after the fruit is gathered with the stronger one, using soft water for dilution and preferably hot, spraying or syringing two or three times at an interval of three days, so as to destroy the young as they hatch out. The eggs cannot be destroyed by the treatment, hence the repetition of the applications is necessary to destroy the pest. The solution should be applied with sufficient force to penetrate the web, and at a temperature of 90° to 100°.

Diseased Fuchsia and Arum Bulbs (F. G.).—1, The spots on the Fuchsia leaves are caused by a parasite fungus, *Oospora epilobi*, which produces brown spots or blotches on the upper surface of the leaves, often running together, and involving a large portion, if not the whole, of a leaf, sometimes causing the foliage to fall so that the plant is almost defoliated. The fruits are produced in whitish tufts on the under side of the leaves, and consist of conidia or spores broadly elliptical or globose, forming long concatenate chains. The fungus is somewhat rare, but occasionally infests Fuchsias, both outdoors and indoors. It may be destroyed by spraying with sulphide of potassium or liver of sulphur, $\frac{1}{2}$ oz. to 1 $\frac{1}{4}$ gallon of water, first dissolving the sulphide in a pint of hot water, and then making up to 1 $\frac{1}{4}$ gallon with cold soft water. It is necessary to reach the under side of the leaves, applying by means of an atomiser, such as used by hairdressers, and just coating with the finest possible film. The plants will then, or even naturally, grow out of the disease. 2, The "bulb" of Arum has gone "soft" because a fungus has infested and destroyed its tissues. The whitish mould appearing externally is the early stage of the fungus or conidial form, and known to fungologists as *Botrytis galanthea*. At a later stage numerous minute black sclerotia are formed, and resemble black grains sunk in the outer parts of the bulb. These are the resting bodies, and known as *Sclerotinia galanthea*. The mycelium of the fungus penetrates the tissues of the roots, and ultimately sclerotia are also formed there. Sometimes only a portion of the rootstock is affected, when by cutting this away the younger part will remain quite sound and a good growth of plant ensue. This shows that the fungus must be got rid off, as by destroying the diseased portion no sclerotia are left to push growth and start the disease anew. All diseased roots or affected parts should be destroyed by burning. Possibly tainted roots would be freed from the fungus by steeping them for a quarter of an hour in water at a temperature of 132 $\frac{1}{2}$ °, or not over 135° nor less than 130°, or steeping overnight in a solution of formalin, 1 part in 400 parts water. An addition of air-slaked lime to the soil along with an equal proportion of soot by measure is also advantageous, a couple of small handfuls of the mixture being added to half a gallon of potting soil, or, if the bulbs are planted out, $\frac{1}{2}$ lb. of the mixture per square yard, digging in.

Shrub Infested with a Peculiar Fungoid Disease (Torquay).—Up to the time of writing no specimens, which you say have been forwarded by parcel post, have reached us, therefore we are unable to advise. In the case of the box turning up, or fresh specimens being forwarded to us, we shall be pleased to examine them and report thereon.

Strains of Carnations and Picotees (F. W.).—The three best flowers sent are No. 1, Red edged Picotee; No. 2, a purple edged Picotee; and 3, a purple flake Carnation. As sent these do not favourably compare with named varieties in commerce; still, we recognise the fact that they have had no special cultivation. At any rate, they are worthy another season's test. The self coloured flowers may be useful border varieties, but they are simply ordinary flowers.

Exhibiting Fruit (D. M. N.).—According to the wording of the prize schedule there is nothing to prevent you from showing all Grapes. It is another instance of loose wording of a prize schedule. Instead of its reading, "collection of six dishes of fruit, in six distinct varieties (Pines excluded)," distinct kinds should have been substituted for "varieties." In this case only one variety of Grape would be admitted, but this difficulty is usually obviated by a clause to the effect that one dish each of black and white Grapes may be shown, or something to that effect. You ought not to be disqualified by showing four varieties of Grapes, as suggested, but in order to avoid any unpleasantness we would suggest that only black and white Grapes be shown, the other four dishes being composed, say, of a Melon, Peaches, Nectarines, and either Figs, Apricots, Plums, or Cherries.

Circumference of Roots for Exhibition (R. A. B.).—Coarseness is a relative term, and implies irregularity of outline and general bad shape without reference to size. If it were not so, high cultivation would have no significance, and in many cases it is ignored for mere taste, the finest and cleanest examples of Large Guernsey Parsnip being placed behind moderate examples of The Student, simply because the adjudicator has a proclivity for a medium-sized variety, and would even go so far as to award a prize to a medium-sized root of Hollow Crown rather than to a full-sized, clean-grown specimen weighing perhaps 5 lbs., and the other not more than a quarter of the weight. A fair circumference for Parsnips is $7\frac{1}{2}$ to 9 inches; Beet, 6 to $7\frac{1}{2}$ inches; Carrots, $4\frac{1}{2}$ to 6 inches; and Turnips, $7\frac{1}{2}$ to 9, or even 12 inches. The main points are clean growth and even outline, with even size.

Names of Plants (Kewite).—Cherry Plm. (*Keep Plodding*).—The Peach is a fine specimen of Alexandra Noblesse. The Rose was withered. The other plant is Begonia maculata. (A. B. C.).—1, Nephrolepis tuberosa; 2, Adiantum formosum; 3, Pteris cretica cristata; 4, Selaginella Wildenowii; 5, Adiantum cuneatum elegans; 6, Pteris majus (syn. Ouveaudi); 7, Begonia Scarffiana. (S. P.).—1, Echium vulgare, the Viper's Bugloss; 2, Stachys sylvatica; 3, Lychnis Viscaria var. alba; 4, Scabiosa columbaria; 5, Lysimachia vulgaris; 6, Monarda didyma; 7, Veratrum nigrum; 8, Flowers of the Ailanthus glandulosa or Tree of Heaven; 9, Spiraea salicifolia var. carnea. Heracleum giganteum is known as the Cow Parsnip or the Cart-wheel Flower. (J. C. S.).—Dracocephalum canariense is a purple flowered plant and takes its name from the islands whence it comes. It is more correctly known as Credronella triphylla, and is not hardy. Your other question will be answered next week. (Novice).—1, We cannot name leaves without flowers, or mere varieties of garden flowers; 2, Spiraea opulifolia; 3, Clematis; 5, Geranium pratense. (A Reader).—Hedychium is a genus (not a species), and is grouped with the Zingiberaceæ or Gingerworts.

Next Week's Events.

Friday, August 16th.—"One and All" Flower Show at Crystal Palace (two days).

Saturday, August 17th.—Bankfoot (Perth) Horticultural Society.

Tuesday, August 20th.—Grandpont Horticultural Society.

Wednesday, August 21st.—Shropshire Horticultural Society's Show at Shrewsbury (two days).

Trade Catalogues Received.

Dickson & Robinson, Manchester.—*Bulbs and Roses.*

Dicksons & Co., Edinburgh.—*Flower Roots.*

E. P. Dixons & Sons, Hull.—*Choice Bulbs.*

Hogg & Robertson, Dublin.—*Bulbs, "Holland in Ireland."*

Wm. Paul & Sons, Waltham Cross.—*Bulbs and Winter Flowers.*

J. R. Pearsons & Sons, Chilwell.—*Bulb Catalogue.*

Sutton & Sons, Reading.—*"Suttons' Bulbs."*

Toogood & Sons, Southampton.—*Catch-crops.*

James Veitch & Sons, Limited.—*Bulb Catalogue.*

"Field" Notes.—In our issue of last week, owing to inadvertence, our indebtedness to "The Field" for the paragraphs entitled "Single-flowered Hollyhocks," "Alstromeria aurantiaca," and "Pheasant's Tail Grass," was overlooked.

Covent Garden Market.—August 14th.

Average Wholesale Prices.—Fruit.

	s.	d.	s.	d.		s.	d.	s.	d.
Apricots, 20s., 24s. ... box	1	0	to	1	3	Grapes, Muscat	2	0	to 3 0
„ ½ sieve	4	0		6	0	Lemons, Naples, case ...	24	0	30 0
Bananas	8	0	12	0		Melons, each	1	0	2 0
Figs, green, doz.	2	0	4	0		Pines, St. Michael's, each	4	6	6 0
Grapes, Hamburgh, lb. ...	1	0	1	6					

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.		
Artichokes, green, doz. ...	2	0 to 3	0	Leeks, bunch	0 1½ to 0 2		
„ Jerusalem, sieve	1	6	0 0	Lettuce, doz.	0 6	1 0	
Batavia, doz.	2	0	0 0	Mushrooms, forced, lb. ...	0	8	0 9
Beans, French, bushel ...	4	0	0 0	Mustard and Cress, pnnt.	0	2	0 0
Beet, red, doz.	0	6	0 0	Parsley, doz. bnchs. ...	2	0	3 0
Cabbages, tally	1	6	3 0	Peas, bush.	4	0	0 0
Carrots, new, doz. bnch.	3	0	4 0	Potatoes, new English, ct.	4	0	6 0
Chicory, Belgian, lb. ...	0	4	0 0	Radishes, doz.	0	6	0 9
Corn Salad, strike	1	0	1 3	Shallots, lb.	0	4	0 0
Cucumbers, doz.	2	0	3 0	Spinach, bush.	4	0	5 0
Endive, doz.	1	3	2 0	Tomatoes, English, lb. ...	0	3	0 4
Greens, bush.	1	0	1 6	Turnips, doz. bnch. ...	2	0	3 0
Herbs, bunch	0	2	0 0	Watercress, doz.	0	6	0 8
Horseradish, bnch.	1	2	1 6				

Average Wholesale Prices.—Plants in Pots

	s. d.	s. d.		s. d.	s. d.				
Aralias, doz.	5	0 to 12	0	Fuchsias	3	0 to 4	0		
Araucaria, doz.	12	0	30	0	Geraniums, scarlet, doz.	0	0	4	0
Aspidistra, doz.	18	0	36	0	„ pink, doz.	0	0	4	0
Campanula, pyramid, doz.	10	0	12	0	„ King of Denmark, doz.	0	0	4	0
„ isophylla	4	0	6	0	Hydrangea panicula, doz.	18	0	24	0
Crotons, doz.	18	0	30	0	Hydrangeas, white, pink	9	0	0	0
Dracæna, var., doz. ...	12	0	30	0	Lycopodiums, doz. ...	3	0	4	0
Dracæna, viridis, doz. ...	9	0	18	0	Marguerite Daisy, doz....	3	0	4	0
Ferns, var., doz.	4	0	18	0	Mignonette, doz.	6	0	0	0
Ferns, small, 100	10	0	16	0	Myrtles, doz.	6	0	9	0
Ficus elastica, doz. ...	9	0	12	0	Palms, in var., doz. ...	15	0	30	0
Foliage plants, var., each	1	0	5	0	„ specimens	21	0	63	0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1 0	to 2 0	Marguerites, white, doz.		
Carnations, 12 blooms ...	0 6	0 0	bunches	1 0	to 2 0
Cattleyas, doz.... ..	15 0	18 0	„ yellow, doz. bnchs.	0 6	1 0
Eucharis, doz.	3 0	4 0	Odontoglossums	3 0	4 0
Gardenias, doz.	1 6	2 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz.	1 0	0 0
bunches	3 0	0 0	„ pink, doz.	1 0	0 0
Gladioli, doz. bnchs. ...	4 0	6 0	„ yellow, doz. (Perles)...	1 0	1 6
Gypsophila, doz. bnchs.	2 0	0 0	„ red, doz.	0 6	1 0
Lilium lancifolium album	0 9	1 0	Smilax, bunch	1 0	2 0
„ rubrum	1 0	1 6	Stephanotis, doz.	2 0	2 6
„ longiflorum	1 6	2 0	Stock, white, doz. bnchs.	2 6	3 0
Lily of the Valley, 12 bnchs	12 0	18 0	Sweet Peas, white, doz.		
Maidenhair Fern, dozen			bunches	2 0	0 0
bnchs.	2 0	3 0	„ coloured, doz. bnchs.	2 0	0 0
Mignonette, English, doz.	0 9	1 6	Tuberose, gross	1 6	0 0



Farming Without Stock.

THERE are many ways of farming, and although we, as farmers, are said to travel much in the same way as our fathers and grandfathers, yet it must be confessed that there is no business that gives more opportunities for each man's own individual enterprise. A man's early training has often much to answer for. If he has been an observant man and boy he has noted the successes and failures of his neighbours, and out of or by their experience he will guide his life work. We often learn more from failures than by any other means. A farmer has to be an adaptable man. He is never quite sure of what to-morrow may bring; he certainly is never sure of what the next season will do. We were very much struck by the remarks of a gentleman the other day. He was speaking of farmers being always on the grumble at adverse seasons, and he calmly observed, "That if farmers farmed better we should hear less of adverse seasons!" Severe as that was, there is still a germ of truth in the remark. There is no doubt about it, that impoverished, badly farmed land suffers more from drought and other ills than well farmed land. Yet as the rain falls (or is withheld) on the just and unjust alike, adverse seasons affect us all more or less. As to different styles of farming, one man swears by a good root crop, another will have none of it; one affects bare fallows; one folds all his sheep; one will graze; one will produce

milk; another provides Potatoes and Celery for the multitude; another pins his faith on a Shorthorn, or some other well defined bovine race; another hangs to the Shire; another prefers wool and mutton; all have in a greater or less degree given up Wheat growing; some whose land favours the production see that they have acre upon acre of best malting Barley; and so on we might continue the list *ad infinitum*, but all are agreed on one point, and that is whatever crops they grow, whether for sale or home consumption, the waste to the land must be made good by plentiful dressings of good manures. The natural form of manure is the waste product of the animal creation, but not being content with a two-fold return, we supplement that by a variety of highly stimulating manufactured tillages; but still, when all is done, there is not one better than good farmyard "muck." To produce that manure, and to make the best of "home growths," stock is needed, and to hear of a farmer who farms successfully without stock, is like hearing of a builder making a house without bricks.

We are always open to conviction, and we try to read with unprejudiced mind, and to us the account of a farm in Hertfordshire, described by Mr. Rider Haggard, is most interesting. We have referred to his articles before, and shall again and again, if we are spared. He sets before us, in clear, concise language, a series of pictures of farms and farm management in this pleasant country of ours. To some of us the districts are familiar, to us all they present many points of interest. The farm in question is called Blount's Farm, Sawbridgeworth, the owner Mr. Prout. The experiment is no new one, it has been going on since 1861. When taken in hand by the father of the present owner, the farm was in shocking condition, undrained (the land is strong), with small fields and untidy, uselessly big fences. Draining would come first; indeed, we are sorry to say our experience of strong land is that it comes first, last, and in the middle too. Small fields are always wasteful. Hedges or fences were taken down, and the fields average 30 or 40 acres apiece. Cereals, Clover, Beans, with Mangolds for the twelve horses, are what Mr. Prout grows, and every year everything is sold off the land that it produces, nor is the grain and straw replaced by imported manure (muck). How is this done? In 1865 samples of the land were submitted to Dr. Augustus Voelcker, who pointed out what elements should be added from time to time to insure the permanent fertility of the land while producing successive crops of cereals. Added to this treatment, the land was thoroughly drained and well worked—and what is the result? In 1877 the soil was again analysed, and found to be richer than it was in 1865, and this after constant Corn crops, and with every stalk of straw sold off. This system is still going on, and the yield does not lessen by a single bushel. Now for a few figures. Take the year 1895. The average production of Wheat that year was—Hertfordshire: Wheat, 26 and a fraction bushels; Barley, 29; Oats, 35. Lincolnshire: Wheat, 32; Barley, 35; Oats, 51. Total average of Wheat for Great Britain, 28. Now for that year Blount's Farm works out thus:—Wheat, 36 bushels; Barley, 40; Oats, 40; Beans, 32, per acre. That this is not an exceptional year will be proved when we state that, for over a period of seventeen years, the average has been—Wheat, 36 bushels; Barley, 40 bushels per acre.

The analysis of the soil showed that it contained all elements necessary to the growth of cereals excepting phosphates and ammonia, and these Mr. Prout supplies. After Wheat is sown, which he gets in as early in September as possible, in January he gives the land 4 cwt. of mineral superphosphate per acre, and in the middle of April about 1½ cwt. of nitrate of soda per acre. Now to insure a good crop both these dressings are needed, the one supplements the other. Steam cultivation is extensively used on this farm, and it is thoroughly well done. Wheat is steeped for twenty-four hours in a solution of bluestone, which proves a thorough preventive of smut. Nitrate of soda and constant rolling keep the wireworm completely in control. The manure produced by the twelve horses is used for the growth of Beans and Mangolds. In bygone days the grain crops used to be sold standing, the buyer taking the risks of harvesting, &c. This is no longer done, and Mr. Prout sells the Corn in the ordinary way, the straw by auction. Mr. Rider Haggard assures us that Mr. Prout is farming at a profit. This system could not be carried out in remote districts, as there would be no market for the straw, fodder, &c., and the cost of conveyance to the consumer would take all the profit. There must be cheap and easy transit. Then, again, it is most difficult to get men out of the old ruts (we refer to the labourers); they set their faces as a body against any innovation, and without their co-operation the farmer is lost. We remember a case which came under our own observation, where a farmer coming into a new neighbourhood commenced Potato growing. Not only did the farmers disapprove, but the men hated the job, and threw every possible obstacle in the way; their ingenuity was wonderful, and it took years of patience to overcome their objections.

We should like, if we do not weary our readers, to give the facts and figures relating to three fields, as seen by Mr. Rider Haggard this year, and the reader must please remember (we do not mean of us forget) that this has been a season of drought.

Field No. I.—Barley sown April 19th, dressed before sowing with 3 cwt. mineral superphosphate and 1 cwt. guano; on May 14th 1 cwt. of nitrate. Total cost, £1 5s. per acre. Crop splendid in colour, thick and level.

Field No. II.—Brookfield. Oats after Barley; steam ploughed. Drilled October 5th with 3 pecks per acre black winter Oats; January 25th, 4 cwt. superphosphate; April 19th, 1½ cwt. nitrate per acre.

Field No. III.—Beadles Top. Wheat after Oats; steam ploughed. Drilled October 30th with 8 pecks per acre white chaff, Browick. Dressed January 23rd with 4 cwt. mineral superphosphate, and on April 9th with 1½ cwt. nitrate per acre; May 3rd, 10 lbs. per acre, Clover seed cross-drilled among the Wheat. The Wheats throughout the farm were tall and of a rich good colour.

Work on the Home Farm.

We had hardly time to think about harvest before we were in the midst of it, and now there will be no stops except for weather. The latter, however, has taken a showery turn, and is sufficiently catchy to be awkward for the binders. These are now practically universal, and except for opening out, the scythe is not used. We have not seen a hand-bound field of Corn this season so far. What a revolution it has been! The appearance of the stooked crops is decidedly satisfactory for so dry a season, but though Wheat may turn out well, Barley is small, which must spoil the yield. The samples of grain ears in the farm produce classes at the local show were far below the average, in fact a judge remarked that they denoted a poor outlook for farmers. Nearly all the Corn is ready for cutting, and fine weather is very desirable.

The Turnip crop improves every day, but weeds keep growing with the showery weather, and there is plenty of weeding still to do. The men set free by the use of binders will be fully employed amongst Turnips until there is Corn ready for stacking.

It is evident that Turnip prospects are rising in the estimation of farmers, for at our annual lamb fair there was both a very small show and a strong demand, consequently prices were 5s. higher than last year, and 30s. per head a fairly common figure. Perhaps the large profit made last year between midsummer and Michaelmas may have more to do with the brisk trade than the appearance of the Turnips has, but we fail to see much prospect of plunder out of lambs just now, and we think caution advisable, unless the purchaser is the possessor of much old grass and fog.

Seeds are very bare, and the land is too hard to plough for Wheat, even if the pasturage could have been spared. One compensation that we had for wet seasons and late harvests was a good stale seed-bed for the following year's Wheat crop.

There is no Clover amongst the Barley to make harvesting difficult, not enough, in fact, for exposure of the surface reveals a very scanty plant. When old seeds are dried up and almost killed it is not surprising that the young plants succumb.

All kinds of pigs are yet scarce and dear. This is the most sustained boom in the trade that we can recall. We suppose the slump cannot be far off now. There will not be a great supply of pig Potatoes, though offal Corn may be plentiful. When farmers possess pig food they must have pigs' mouths to eat it.

Progress in Agriculture.—Although Western Australia cannot yet boast of the enormous areas under cereal cultivation to be met with in the Eastern States, yet the growth of this industry is most encouraging, and the liberal conditions offered by the land laws of the State will doubtless eventuate in greatly increased settlement and production in the near future. During the season just ended, the returns show that 70,923 acres were under Wheat, and this area produced 751,305 bushels of Wheat, or an average of 10.59 bushels per acre, which is slightly under the average of the State for the past four years. These figures show the conditions here are in every way favourable for the cultivation of Wheat, and the fact of the area under cultivation increasing from 31,489 in the year 1897, indicates that the suitability of the soil and climate for agricultural pursuits has not been overlooked. The crops of Oats and Barley have been equally encouraging, as the last returns to hand show that 3940 acres of Oats returned 73,556 bushels, or an average of 18.67 bushels per acre, and 3,885 acres of Barley yielded 56,587 bushels, or an average of 14.57 bushels per acre.

Feeding Value Whey and Skim Milk.—Whey has less value than skim milk, because some of the ash has been removed with the casein in making cheese. Skim milk is commonly valued at 15c. per 100 lbs. for feeding calves and pigs. Director Henry of the Wisconsin experimental station, in ten trials found that 760 lbs. whey would equal 100 lbs. for corn meal and shorts by partial substitution, thus being worth 8c. to 10c. per 100 lbs. with this feed at 12 dols. to 15 dols. per ton respectively. The following analysis is given by Prof Harry Snyder:—

COMPOSITION OF 100 LBS. OF				
	Cow's milk.	Skim milk.	Butter milk.	Whey.
Water, lbs	87.50	90.25	90.50	93.00
Fat	3.50	0.20	0.20	0.35
Casein and albumin ...	3.25	3.60	3.30	0.80
Sugar	5.00	5.15	5.30	5.20
Ash	0.75	0.80	0.70	0.65

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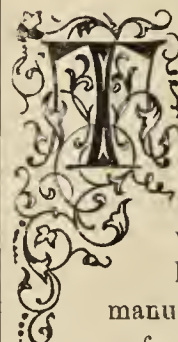
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THURSDAY, AUGUST 22, 1901.

Warfare and Peace.By squares of tropic summer shut
And warmed in crystal cases.* * * * *
But these, though fed with careful dirt,
Are neither green nor sappy;
Half conscious of the garden-squirt,
The spindlings look unhappy.

THUS the poet. Not everyone would think of Tennyson as having been guilty of such a cynical utterance as that "careful dirt" in the lines above. What visions of marvellous mixtures it conjures up! of loam, and peat, and leaf mould, cow manure, charcoal, and sand, to enumerate a few of the ingredients to be found in gardeners' composts. Doubtless the in-

tention of the poet was to use the glass house and its spindling occupants as a symbol of the shortcomings and failures in the broader issues of life; especially is this so if we may judge from the lines which follow. In acknowledging this, I think the words can scarcely fail to impress us with thoughts of the many battles in the campaign against foes of every description into which a gardener's career usually resolves itself. Early in life he commences a daily combat on behalf of cleanliness. Scrubbing floors and pots; learning discipline and discretion from those next in command. Gaining these rudimentary elements, he rises surely, and perhaps slowly, from the lower ranks—if he possesses the true fighting instinct—to a higher place. He thus becomes one of those who, empanoplied in blue apron and armed with the sharp lance of experience, go forth day by day "to destroy the evil and preserve the good." Never did knight of olden time depart on nobler quest. The matter-of-fact person may be inclined to argue that I am taking an idealistic view of a commonplace avocation. Is there any single thing connected with horticulture that can truly be described as commonplace? I can imagine the emphatic no! that question would bring from all enthusiastic lovers of gardens, whatever their station in life.

To return to my text. The real gardener knows he must nearly always be prepared to face his many

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enemies. A strategic ruse here, an outflanking movement there. Weary often, seldom conquered; often poorly rewarded in the matter of worldly gear for all his struggling; content if by energy well directed he has circumvented another foe, it may be a batch of *Chrysanthemums* brought safely through an attack of rust. A house of Grapes has perhaps by careful provisioning been raised from a weak condition again to fighting strength, or an ordinary everyday garden crop may have been carried triumphantly over a period of drouthy trial. These are the battles delighted in by the warrior craftsman. At times mere skirmishes, and again grim struggles, in which all that brain and muscle are capable of must be freely given, and are given without stint, unsparingly. Is it nothing that men will labour unweariedly through our frost-bitten winters that the requisite temperatures may be maintained within those "squares of tropic summer" to insure supplies going regularly into market; that food may be bought, and flowers may be had in the dull season to cheer the sick and brighten the homes of the wealthy? True, there is the reward in a monetary sense, often sadly inadequate as a recompense for the amount of labour cheerfully given; but this is also true of the soldier's guerdon in actual warfare.

It were possible to take still higher ground in noticing what has been done for gardening by botanical collectors in foreign climes. Men have given health—even life itself; faced danger great as was ever encountered on battlefield. For what? A pecuniary consideration? Nay! Their trials were endured for the sake of gaining wider knowledge in the art of gardening and for the enrichment of our gardens at home. Look back through the records of horticultural history for the past fifty years, and then, if you can, say there can be no heroism in connection with gardening. There can be no gainsaying that the gardener, during the active portion of his career, must be well equipped to be successful. Energy, courage, watchfulness and resource, are every whit as desirable as amongst the rank and file of an army. To the chosen few there may come distinction. Here and there we see a man become the possessor of a silver cup or a gold medal, but to the majority there is scanty meed of praise or recognition. I have dwelt upon the combative side of horticulture thus far, but we must not forget there is another point of view from which to look at what is frequently spoken of as "the peaceful art of gardening." That it may bring no small measure of peace to the breast and mind of many a world-worn toiler few will deny. Despite what I have already written of the gardener's fighting qualities, he is generally looked upon as a "peaceable sort of animal." To us whose everyday lives are encompassed by the signs and wonders (many they are, if we have eyes to see) of our ancient craft, there can be little doubt of the enjoyment to be derived under certain conditions. Success in production, considerate and appreciative employers, a sense of work faithfully carried out, and the amenities of intercourse with our fellow gardeners, each and all of these count for much in sweetening a somewhat toilsome and careworn existence.

The successful gardener is usually looked upon as a lucky individual by those who are still upon the lower rungs of the ladder. They fail to think of the hard work, the strivings, and even failures, which men undergo ere they reach the summit of their aspirations; and having reached their goal, outsiders can little understand the difficulties encountered in maintaining the position won. Yet with all these trials one can scarce describe a gardener's life as unhappy, when, under Providence, his ventures are brought to a successful issue. When crops are bountiful and produce of extra fine quality, who is prouder or happier? In his own small realm he may be, in a sort, almost likened to a monarch. He may preside over a place remarkable for its beauty and neatness, and though he knows well he is but an instrument in furthering the pleasure of his employer, the gardener frequently obtains as much, and often more, enjoyment from the results of his labours than they do who pay for the exertions of his mind and body.

Again, what ennobling lessons the man of intelligence may gain who lives so close to the secrets of Nature! The refining and elevating influences, have they not often been written of? It is

true the worthy Dame has disquieting and tempestuous moments, but there come the peaceable interludes when a saunter round some old world garden brings delight unspeakable; when the ear is filled with a multitude of musical sounds, mingling in indescribable harmony; when the sight of bud and leaf and blossom is as a glimpse into the far away vistas of Paradise. But yet I must not indulge in rhapsodies, there is a pathetic side to all this which I would fain touch on in conclusion. There comes a time, say from the middle of October to about the same period in November, when it always appears to me that the tension to which a gardener is subject may be to some extent relaxed; when a short armistice seems to be arranged, or a truce called with the foes which had been "as a thorn in the flesh." Plants are housed for the winter; crops are harvested, and, except in the case of very early forcing, the winter cleansing has not been taken in hand. A peaceful period when we may take stock of the season's happenings, and look back on victory or defeat according as the fight has gone—for or against us. This short spell is, it seems to me, a reminder of the time to come, when, having passed through the various stages of warfare, we come to that other stage, when our spades hang rusty and our hoes are idle. No more is the blue apron donned by us, but is worn by more active participants in the fight. To all whose existence is sufficiently prolonged there comes this "quiet evening." A sort of rest for the wearied brain and body before passing to a greater garden than we can imagine—

Where falls not hail, or rain, or any snow,
Nor ever wind blows loudly.

In the meantime we can all take to heart, and act upon, the lines with which Tennyson concludes the verses an extract is taken from at the beginning of this article.

And I must work thro' months of toil,
And years of cultivation,
Upon my proper patch of soil
To grow my own plantation.
I'll take the showers as they fall,
I will not vex my bosom;
Enough if at the end of all
A little garden blossom.

—JOHN WRIGHT, JUNIOR.

The Trials of a Landscape Gardener.

IN some respects a good landscape gardener, landscape engineer, or landscape architect, whatever he may be called, in connection with the artistic and practical development of landscape and grounds, occupies an unenviable position, and he may be likened to the pioneers in any great cause where advances are met with distrust and antagonism born of ignorance. He has, first of all to show that his work, though closely associated with the pick and shovel, is not of it, and has artistic realisations as well as natural and purely mechanical ones. He is a true artist with visionary ideas largely, which are tempered by the practical moulding of Nature and brought into living facts. An undeveloped piece of land is seen by him through evolutionary lenses, and he pictures the effects which might be produced by grading, planting, arranging paths and drives, or altering the course of streams. His first picture is, perhaps, barely more than an outline such as a painter might sketch preparatory to adding the colours and touches which almost put life into a portrait; the development and details are largely the result of study and practical ability, always accompanied by the artistic touch and nature appreciation which belong to a good landscape gardener.

But a small percentage of the public, says "Meehans' Monthly," appreciates the qualifications possessed by the landscape gardener; to the remainder he is simply an unusually good gardener, or one who is too much above menial work and desires to theorise. They do not believe he can be on the same plane as men of other professions, and he has to force his way to the front by showing results, and these do not come quickly as a rule. Like any other profession, there are "quacks," to use a meaning popular term, and the true landscape artist must beat down the barrier of distrust which such men create continually. Their knowledge and practice are both limited, and they will make any kind of bargain, whatever is best calculated to obtain a good sum for a little work—future results are of but little moment to these transient gardeners.

Where a man is recognised to be master of his profession he should be hampered as little as possible, especially not before he has opportunity to present his ideas. Expense ought, so far as practicable, be a secondary consideration, just as it would be were a doctor of medicine called in for medical advice. The best should always be the highest aim in any walk of life; and no one asks to receive value, even in advice merely, without offering full equivalent.

*Coryanthes speciosa.*

This belongs to a genus of which the flowers are of a very singular character, some of the species being also remarkable for their handsome appearance. One thing very much against them is that the flowers only remain in beauty two or three days. At the same time, wherever a collection of Orchids is grown some of the species of this genus should find a place.

Their culture is not difficult. Like most Orchids they require a season of rest after the growth is completed. The house should be cooler at the resting period, and the roots ought not to be watered until the compost is dry. During growth the plants require good supplies of water, and the roots must not suffer at that time. The pots should be filled two-thirds of their depth with potsherds, and some clean sphagnum be placed over the crocks. The best compost is very fibry turfy peat and sphagnum in equal parts. They also succeed well in baskets, and will also grow on blocks of wood.

C. speciosa is a native of Brazil, and requires to be grown in the warm house, at least when making its growth. The leaves must be kept quite clean by occasionally sponging them with tepid water.—B.

The Week's Cultural Notes.

Every day now sees the sun diminishing in power, and it becomes necessary to hasten the ripening of all classes of Orchids now finishing their growth. The ripening or consolidating process takes a different form

with different species, and it will not do to expose, say, a *Phalænopsis* to the same amount of sun and air that would be right and necessary for a *Dendrobium* of the deciduous section. With the latter the time for ripening and resting is easily apparent. As soon as the last leaf on the stems is perfected the plants should be placed in the full sun, and the amount of atmospheric moisture reduced. The roots must still be kept moist until the foliage turns preparatory to falling, when less water must be given and the plants gradually

dried off, until in winter they may for several weeks be kept absolutely dry. Nothing of this kind can be allowed with the more sensitive leaved Moth Orchids. They should by degrees be inured to more light and air, but the change must be very gradual, and nothing like dry rest is necessary at any time. Just now the water supply must be very free, and it must continue so as long as any signs of growth or young roots is apparent.

Touching the roots, these form a good index to the condition of the plants. When they are beginning their resting season the root tips gradually cloud over, a white film covering the moist growing points, and this is when the slackening of the moisture supply should begin. This clouding is more easily noticed in the distichous-leaved section,

such as *Phalænopsis*, *Aërides*, *Saccolabiums*, *Angræcums*, and *Vandas*, than in those having smaller roots; but a watchful cultivator will notice it in all, and alter his treatment accordingly.

Cattleya Bowringiana requires more moisture now than most species, its very free-rooting nature showing that a full supply is needed now that the flower spikes are forming, and the pseudo-bulbs are developing. *C. citrina* will in many cases be beginning to grow, and if it seems necessary a little fresh compost may be placed about the new growths, carefully avoiding injury to them in the process, or disturbing the roots. No endeavour to force it to grow must be made; just let the plants have their own way, and treat them accordingly. *Cattleya Dowiana*, *C. aurea*, and *C. gigas* are very apt to start into growth now, and this should be prevented if possible, not by unduly drying the roots, but by placing the plants well up to the light, and allowing plenty of air.—H. R. R.

Plum Season Opens.—The Plum season is to be a bad one, according to the opinion of Covent Garden dealers. The Plum crop this year is in quantity about half of that we had last year. They are selling at 2s. 6d. to 3s. a basket of 28 lbs. Last year one could

buy them in London for 1s. per basket, because the quality was so inferior. The Plums on sale at present are more fit for cooking than anything else, but next week we shall have good eating Plums on sale. Kent is a good place for Plums, but Middlesex is much better, because in the latter place growers take more pains, not only in growing the Plums, but in sorting them. Kent growers put all their Plums in one lot; the Middlesex men sort them in three qualities. The best year we had for Plums was about six years ago, when dealers made a great deal of money on them.



CORYANTHES SPECIOSA.

Bulbs and their Culture.

EVER onward must the gardener look. While the heat of summer is still with us preparations must be made for producing a display of flowers during the autumn, winter, and spring months. What would our British winters be without the touch of brightness given by the hosts of flowers obtained from forced bulbs? Money spent in the purchase of bulbs is usually repaid a hundredfold in the pleasure derived from the flowers obtained. Fortunately this season the prices are slightly lower than those quoted last year, and it is, I think, well for all of us to remember that a great industry in bulb growing, especially Daffodils and Tulips, has sprung up in the Emerald Isle, and that Daffodils and Narcissi are also largely grown in England. As we can obtain bulbs of the finest quality from such sources, why should we send our orders to foreign lands? It is always wise to give orders early, and thus secure the best instead of waiting to pick up "job" lots late in the season, when they are practically useless except for bringing on in cool structures, and are usually of very inferior quality.

Bulbs intended for very early forcing ought to be potted during the next few weeks; I will, therefore deal with them in this note, and refer to those required for the main batches in a subsequent article. Roman Hyacinths are still as popular as ever, because they are so easily forced, and the flowers can be turned to account in so many ways. When purchasing bulbs it is an easy matter to be deceived, for the largest examples are by no means always the best. Those which are firm, smooth on the surface, and, above all, heavy for their size, will, under proper treatment, invariably produce fine flower spikes; indeed, I have found that examples of this description, if only of moderate size, will produce larger flower spikes and a greater number per bulb than can often be obtained from examples twice their size. The reason for this is that the small firm bulbs are grown on heavy soil, the very large ones on light land.

In preparing the potting compost, the chief points to bear in mind are that it should be sweet, free from insects, and fairly open, so that the roots can work freely in it. Soil which was removed from a Cucumber or Tomato house six or nine months ago, and has since been fully exposed in the open air, will, with the addition of one-fourth of good leaf soil and sand, answer admirably. If turfy loam is employed, it should be in a decaying state through having been stacked for at least six months; two parts of this to one of leaf soil then form a suitable compost. When the expense of cocoa-nut fibre can be incurred I advise its use in preference to leaf soil, as bulbs root with wonderful rapidity in it, and the flowers produced are equally satisfactory.

In writing about the potting of bulbs, and the depth at which they should be buried, I am afraid we sometimes lay down rules which are too hard-and-fast. I know of one grower, who forces from forty to fifty thousand annually, who has his pots or boxes filled almost to the rims with soil, packs the bulbs closely upon it, and presses them in very slightly, scarcely enough to prevent the plunging material from forcing them out of position, and yet he obtains first-rate results. My own practice is to sink about half the bulb in the soil, with the exception of Daffodils, which I like to bury deeper, so that the point is just above the surface of the soil; and this practice is equally satisfactory. I find, however, that in the case of bulbs intended for early forcing, it is a bad practice to cover them entirely with soil, as it often causes the young shoots to rot, but when potted in the same way, and brought on in a cool house, they succeed quite well when buried deeply. When boxes $2\frac{1}{2}$ inches in depth are employed, the only drainage necessary is a little rough material placed at the bottom; when pots are used, broken potsherds or coal ashes are necessary, the depth, of course, varying according to the size of the pot used. For a 6-inch pot one large crock and a half-inch layer of smaller ones is usually enough. Cocoa-nut fibre or coal ashes are excellent material to employ for plunging. If ashes are used they should be previously exposed to the air for a few months. When such materials are scarce, light garden soil, or a mixture of soil and sawdust, answers well. The great essentials to success in forcing bulbs are to pot early, and allow $1\frac{1}{2}$ inch of growth to be made before the plants are removed from their plunging material.

In addition to Roman Hyacinths, the following bulbs are particularly useful for supplying early flowers:—Narcissus, Paper White, grandiflora, and double Roman; these two may be had in flower early in November. For flowering at Christmas, N. bicolor nobilis and N. princeps are excellent. Among Tulips for early flowering the Duc Van Thol section is still the best; the rose variety bears sharp forcing the best of all, and the well known scarlet comes next to it in that respect; these, with the white Duc Van Thol, form a fine trio for early work. La Reine is among market men forced more largely than any other Tulip for providing white flowers throughout January. When brought on slowly the flowers are pale rose, but with sharp forcing it usually comes white enough to sell well at that season when

flowers are scarce. There are, however, several forms of La Reine; some have a greater tendency to come white than others.

(To be continued.)

Gardening in the Severn Valley.

A GREAT deal has been written and said upon helping the agricultural population to live upon their land and stop the exodus of labouring men to the cities, but this desideratum appears to be as far off as ever. In the matter of small holdings there are a few men who, by dint of plenty of energy and hard work, make a living out of a small piece of land, but they are very greatly in the minority. The Gloucestershire bank of the Severn, say from the Severn Bridge or Sharpness to Avonmouth, borders a wide tract of extremely fertile country, consisting in places of alluvial deposits, and in others of a rich red loam. Around the hamlets and villages of this country are scores of small holdings of a mixed character—orchard, meadow, and cultivated garden ground in very fair proportions. In most cases only the most rudimentary ideas of culture are practised; the vegetables and fruit are badly grown, packed worse, and reach the consumers in all sorts of irregular ways.

It is true that in some parts there are few facilities for transit, but I know that there are fruit and vegetable merchants in plenty who would be glad to send regularly to these parts for the produce if quantity and quality were forthcoming. That the soil is suitable for the growth of this produce there can be no doubt, as witness the enormous crops of second or third-rate Apples, Pears, and other fruits now hanging upon the poor neglected old trees; but of energy on the part of the holders of this valuable land there is extremely little as far as I have seen, and of late I have had opportunities of judging. One man will profess to grow Strawberries, but after the plants are put out the principal labour expended upon the plantation is the gathering of what little fruit is produced. Gooseberries, Currants, and other small fruits are very similarly treated, while the absolute neglect of the orchard trees is a tale that has been too oft told to need repeating. Yet this is the class of fruit unfortunate town dwellers are supposed to stand in need of. Little wonder that big steamers are required to bring us the produce of other lands. On a fine day recently I cycled with a friend through this valley, from the far-famed Berkley Castle down to the dock at Avonmouth, where, by a strange coincidence, one of those splendid steamers run by the Elder Dempster line to and from Jamaica was discharging its enormous cargo of Bananas and other fruits. Here was this beautiful and luscious fruit from thousands of miles away, that within a few hours would be temptingly displayed in the Bristol and Clifton shops, while at our doors, so to speak, are tons of fruit wasting for want of gathering, or, if any of it is gathered, it is usually crammed into a dirty box or basket smelling of fish or something worse, and seldom fresh.

Our market gardeners of course look after their interests, and, incidentally, those of the consumer, better, and their products are fairly well packed and shown by the retailer. But it is the small grower who is so hopelessly careless and slovenly, both in the culture, packing, and delivery, and he it is who expects the biggest price, because his goods are "just in from the country." He it is, too, whom the County Council hopes to reform, by sending lecturers to his door almost, to show by means of magic lanterns and by working experiments how he may increase the fruits of the earth. He seldom attends the lectures, and the lecturer after, perhaps, a ten mile drive in the depth of winter, has the felicity of speaking to half a dozen of men and boys who will ask no questions when invited to do so, preferring to chat the matter over in the village beer house. But this is another story, and has nothing to do with the Severn Valley.

I am acquainted with several men who have taken up small plots of land, and being experienced in the culture of the better class of fruit and vegetables are increasing the output of the land to a large extent. One in particular has gone in for Strawberries, Asparagus, and Tomatoes. He finds a brisk local demand for them; he manages with the aid of a strong lad to keep his place running, and anything he has over, if of good quality, is sent to a well-known Bristol fruiterer, who supplies his own empty boxes and baskets. This is the class of men who are wanted on the land, and there are scores of good gardeners out of situations up and down the country who could do the same, and perhaps by example, and by that sincere desire to help others that is so common amongst gardeners generally, may help to shake some of the apathy out of the other class of small holders.

What is true of this part of the country is, I know, true of many others, and I have often thought that if any practical scheme could be formed whereby the sound knowledge possessed by this large body of gardeners could by combination be brought to bear on the land, their labours could be better rewarded than by taking odd jobs in nurseries or otherwise during the weary wait that often ensues before they obtain situations.—H. RICHARDS.

Seasonable Hints on Florists' Flowers.

Auriculas.

THOSE who have collections of them will ere this have placed them in their summer quarters—viz., facing the north, with a wall or high hedge at the back. Here they will be sheltered from the sun's rays, and so not pushed into quick growth, which very often leads to formation of autumn bloom, which the grower well knows destroys his plant for a good spring bloom. Should aphides appear the frames may be easily fumigated by one of those delightful contrivances which have superseded all the inconvenient tobacco paper or tobacco cloth, which was very nearly as troublesome to the persons using as to the aphides themselves. I mean McDougall's fumeurs and other preparations of a similar character. When properly used not a single aphid is left, they are all killed outright; when tobacco was used many used to drop down on the pot stupfied but not killed, and the next day would be found crawling up again, but the fumeur finishes them off completely. All dead leaves should be carefully removed, and the pots kept well clear of weeds. Watering should be carefully attended to, rain water be always used when practicable. The frames should be kept open night and day, but care should be taken that rain does not come upon the plants, and the glazing of the frames should be well looked to to see that there is no drip, for nothing is more injurious to their well being than this; if neglected the plants become water-logged, and decay sets in. The frames may remain in their summer quarters until the beginning of October. This is, of course, a good time for the grower to increase his stock, and the following varieties, if not already in possession, may be safely added. *Green edges*.—The Rev. F. D. Horner, Prince of Greens, Abbé Liszt, Mrs. Henwood. *Grey edges*.—George Lightbody, George Rudd. *White edges*.—Mrs. Dodwell, Acme, John Simonite. *Sells*.—Heroine, Mrs. Potts. I say nothing of Alpines, for I have never grown them, but there are many beautiful ones now in existence; they are much hardier and more easily grown than the Show varieties.

Carnations and Picotees.

It has been a trying time for these plants, as the excessive drought has prevented the grass from coming on as it ought to do, but during the rains of the last fortnight the plants have considerably altered, and layering should now be carried on briskly. The plants are now flowering, and staking should be carefully attended to. One sighs over the collections of florists' varieties that were common in former days, now we mostly see fancy or border varieties. These are more adapted no doubt to the adornment of the gardens, but they have not the peculiar charm of the florist varieties of former days; indeed many are now contented with growing them from seed, and do not give themselves the trouble of layering. Mr. Martin R. Smith is so carefully hybridising that we are obtaining varieties that will not burst their pods, and thus will diminish the trouble of growing them.

Gladiolus.

The earlier blooming varieties of these are now in flower, and one of the advantages of growing this beautiful autumnal flower is that they bloom in succession, and so prolong their season; indeed Messrs. Vilmorin have marked all their fine varieties in four groups, and divided them according to their time of blooming, the earliest flowering at the end of July, and the latter in the end of September. Those who have the opportunity of seeing Mr. Burrell's splendid strain of these flowers, either at the Drill Hall or at the Aquarium, should take care to note his fine strain of seedlings; they are, I think, equal, if not superior, to the best of the foreign flowers, with spikes often containing twelve, fourteen, and even twenty blooms, closely packed together, and of great size and substance. No flower has probably exhibited the skill and intelligence of the hybridiser more than the Gladiolus; one remembers when three or four blooms were considered a spike, and when the flowers were not half the size that they are now. It is a curious fact that the *G. brenchleyensis*, which was raised at Brenchley in Kent, has not given rise to any of the same strain. Those who wish to keep their beds or groups tidy will see that their plants are carefully staked; they do not absolutely require it, but then it looks very badly to see the tall spikes "flopping about." I think we may look for some further developments of this flower when the *Lemoinei* and *gandavensis* strains become more crossed. Mr. Burrell has got some curious colours, some amongst them being nearly blue. He speaks very confidently of further progress in this path.

Ranunculus.

These are now to be harvested and put by carefully in some place that is frost-proof. The number of those who cultivate them has always been small, and has been still further diminished, both in the north and south. I think this is a great pity; a good bed of them is certainly a very pretty sight. I, unfortunately, am one of those who have been compelled to abandon their culture, and I have transferred my collection to the curator of the public garden at Maidstone. I do not know of anyone who has followed their culture in the same earnest way as Mr. Lightbody of Falkirk, and Mr. Carey Tyso of Wallingford.

Tulips.

I only mention this bulb because I do not see that the attempt to revive their culture as florists' flowers in the south of England has made any progress. Darwin Tulips, Parrot Tulips, and other ornamental varieties, indeed, find much favour. It is almost impossible to find any one now in the southern half of our kingdom who cultivates them with the carefulness and zeal of former days. My recollections go back to the time when Mr. Groom's collection at Walworth used to attract a large number of visitors, and of course also to the time when Mr. Charles Turner of Slough took up their cultivation, but which he was forced to abandon because of their unprofitableness; there was no sale for them, and they were expensive to grow. Even in the north of England, where the taste for them long survived, I do not think that there is as much zeal in their cultivation as there used to be. Gardening, like other things, has its fashions, but I hardly think we shall ever see, in the south of England at any rate, the same love for florists' flowers as there used to be.—D., Deal.

Storing Fruit.

AMONGST the various appendages to a garden, an efficient fruit room is certainly not the least important, yet such a room we seldom see. Generally some back shed is fitted up with shelves in a very rough manner, and on these the winter Apples and Pears are laid, more or less thick as the crop may have been. In too many instances they are obliged to be laid too thick for their keeping well; as they are likely to be all wanted, there is no alternative but to place them so, if the space be too limited for their being kept more thinly. Although we all know that good-keeping fruit will remain sound a considerable time, even when subjected to this treatment, there is no doubt but it would keep much longer if allowed more room from the first, and those instances in which fruits have been kept for long periods will be found to be where plenty of space was accorded them. Some other conditions seem necessary for the well-keeping of fruit, and it will be advisable to point out a few of these individually.

Whatever may be the reputation of a certain variety of fruit for keeping purposes, there is no question but its merits that way are influenced by the situation in which it is grown, as well as the period at which it is gathered, and the condition of the atmosphere at the time. By way of exemplifying these three conditions it will be as well to take a very common case to point them out, and though there may be some difference of opinion on the habits and qualification of the variety given as an example, there is certainly none that has a wider reputation. I, therefore, by way of pointing out the conditions necessary to enable a fruit to keep as long a period as possible in a sound condition, will take the Ribston Pippin Apple as an example.

In very many districts the Ribston Pippin Apple has ceased to be cultivated as a profitable fruit; the trees thriving indifferently for a very few years, either die off or linger on a wretched existence, the dead branches almost equalling the live ones in number. Though there is generally a fair proportion of blossom each season, what fruit there is can seldom be classed higher than second, or, perhaps, third-rate. Now, these fruits have, in many of them, the germs of decay before they are gathered from the tree; black specks near the eye, or, in some cases, near the other end, turn into a mass of decay of a peculiarly bitter quality, differing widely from the ordinary "rot," by which most other fruits are carried off more quickly, but not less surely.

Whatever may be the different opinions regarding this, it seems pretty generally admitted that it is mostly due to the diseased condition of the tree on which it grows, or, perhaps, the worn-out constitution of the variety. Whether this be so or not (and there seems every reason to believe it is so), certain it is that a very large proportion of the Ribston Pippin Apples that are grown fall a victim to this black spot, which, by being of an intense bitter, disqualifies this Apple from mixing with others for making cider, which the decay in other fruits does not necessarily do, as they are not so bitter. Now, this bitter principle is, doubtless, imparted to the fruit by the decaying process it goes through differing from the same conditions by which other fruits become decayed and rotten; and whether the chemical change which takes place in the Ribston Pippin has its origin in the imperfect condition of the fruit at the time it is gathered, and the latent seeds of this disease be engendered then or afterwards, certain it is that a very great proportion of the fruit of this variety falls a victim to this disease. Though some situations favouring the better development of the fruit may render them less liable to it than in others, still it is reasonable to suppose that those places now in a great measure exempt will eventually become diseased like the rest, and the Ribston Pippin Apple will become a matter of history. The purpose is not now to prognosticate this, but to point out what conditions are necessary to preserve what healthy fruit there may be as long as it is possible to do so.—R. (To be concluded.)

Shrewsbury Show.

To those of the readers of the *Journal of Horticulture* who may not have had the opportunity of visiting what has become an event of almost national interest, to wit, the magnificent shows of the Shropshire Horticultural Society, also to those visitors to The Quarry who have not at the same time found leisure to explore the "metropolis of the west," nor are possessed of a knowledge of its buildings and other local associations, it may prove interesting as the concomitant of a brief history of the Horticultural Society to prefix a description of the historical aspects of the town.

Shrewsbury.

The town of Shrewsbury is picturesquely situated upon a rising ground, and surrounded on three sides by the Severn, the isthmus being only 300 yards wide. Shrewsbury derives its name from *Scrobbsbyrig* (wooded hill), which was given to the old British town on this site. The ancient castle, which stands upon an eminence immediately above the railway station ("builte in such a brave plott that it could have espyed a byrd flying in every streete") is now inhabited, but strangers are allowed to visit the grounds as far as the Watch Tower, from which a fine view of the Severn and surrounding country is obtained. It owes its erection to Roger de Montgomery, Earl of Shrewsbury, who also founded the Abbey, and surrounded the town by a wall, few traces of which remain. Here was the old battle ground between the English and Welsh, and Edward I. and Richard II. held their Parliament in Shrewsbury. Near to the castle, on the opposite side of the street, are the buildings of the old Shrewsbury School, founded and endowed by Edward VI., and enlarged by Queen Elizabeth. Here Sir Philip Sydney, Fulke Greville, Wycherley the poet, Judge Jeffereys, and Charles Darwin were educated. The buildings are now devoted to the Free Library and Museum, in which many Roman antiquities, brought from Wroxeter, are preserved. A little beyond the library is a confectionery establishment, where Pailen's "Shrewsbury cakes," so warmly commended in the "Ingoldsby Legends," may still be had. Proceeding through its narrow streets, with its wealth of black and white, half-timbered, picturesque houses, we come to St. Mary's Church. Continuing eastward, we descend the Wyle Cop, and soon reach the English bridge crossing the Severn, built on the site of the old bridge. The Wyle Cop is reminiscent of the kops and kopjes of the Boer war, it having a similar signification, and when Shrewsbury was a fortified town the Wyle Cop proved a formidable stronghold in connection with the castle. The Holy Cross and the Abbey Church, coeval with the castle, are also objects of great antiquarian interest. The only relic of monastic buildings is the fine stone pulpit (Early English) of the refectory, which will be found in the yard on the opposite side of the road. The refectory stood south of the church, and was celebrated as the place of assembly of the first English Parliament in 1283.

At the top of the Abbey Forge is Lord Hill's Monument, 134 feet high, said to be the largest Grecian-Doric column in the world. It is surmounted by a colossal statue of the hero, who fought at Waterloo. On ascending the monument, there is a magnificent view of the surrounding country. Returning to the town, we follow the line of the town walls, passing the Murivance Tower, the only one left of the twenty similar fortifications which once defended the town. Proceeding onwards, we come to St. Chad's Church, a large circular structure, opposite which is the famous Quarry, with its magnificent avenues of Limes along the banks of the Severn, and which, it is needless to remark, has been rendered additionally interesting and historical by the grand horticultural exhibitions held in its spacious grounds. At the foot of the main avenue, planted in 1719, is the Hercules Statue. It was a little beyond here, at The Mount, that Charles Darwin was born in 1809. Returning to the town, with its several hotels and inns, amongst which, in particular, mention may be made of the famous hotel, The Raven, where Farquhar wrote "The Recruiting Officer," and which, also, is generally the rendezvous of the show judges and others interested in the great horticultural fêtes.

Rise of Shrewsbury Show.

"From small beginnings spring great things," and never from a horticultural point of view has this been more strongly exemplified than in the history of this society, commencing, as it did, some twenty-six years ago in a comparatively humble fashion under the auspices of the present twain *doyens* of experienced hon. secretaries, Messrs. Adnitt and Naunton, with the late Mr. Pritchard, nursery and seedsman of Shrewsbury, as chairman, each guaranteeing £20 as a nucleus fund, and an additional number of twenty members, each guaranteeing £18, this last, however, being eventually reduced to £10 each. The Quarry was the site selected for the Society's first show. This was contained in one moderate sized marquee erected in close proximity to the picturesque dingle, formerly a gravel pit. The enterprising promoters were more than justified in their anticipations, when it is stated that upwards of £400 was realised after all expenses were paid, consequently encouraging the committee to hold the succeeding annual on a much more extended scale. This has continued to increase by degrees up to the present time, so that the infant has now grown into a giant of unique stature. The gross receipts for twenty-six

exhibitions reach the prodigious sum of £69,838, of which £6295 has been expended in donations for improving and beautifying the Quarry and other local institutions, in aiding the Gardeners' Royal Benevolent Institution, and in honouring Shrewsbury's distinguished scientist, the late Charles Darwin; a sum of £1086 having been appropriated for the erection of the fine bronze statue of him in front of the Royal Free Grammar School.

Report of the Twenty-seventh Show.

The twenty-seventh great annual floral fête of the Shropshire Horticultural Society was held in The Quarry grounds at Shrewsbury on Wednesday and Thursday, August 21st and 22nd this week. The first day was a very hot one, and multitudes of people thronged to the show and the numerous other attractions. As usual the hon. secretaries, Messrs. Adnitt and Naunton, acquitted themselves to everybody's satisfaction.

Plants.

In the class for twenty stove and greenhouse plants, not less than twelve in bloom, Mr. J. Cypher proved unassailable, his plants being perfect. It is difficult to say which was best of all, but probably the fine specimen of *Erica Marnockiana* deserved that honour. It was a superb plant in every way, excellently grown, and most profusely flowered, the flowers of that bright rich tint so much admired in this species. *Phenocoma prolifera* Barnesi was rather small, but fresh and excellently flowered. *Erica Irbyana* and two plants of *E. Aitoniana* were splendid examples, as was *Rondeletia speciosa* major; *Bougainvillea Sanderiana*, *Clerodendron Balfouri*, *Statice intermedia*, two plants of *Stephanotis floribunda*, *Erica Ewerana*, and a superb *Allamanda nobilis* completed the flowering section, the number being made up with *Kentias Belmoreana* and *australis*, and superbly coloured large examples of *Croton Queen Victoria*, *Sunset*, and *Chelsoni*. It was altogether a grand exhibit, worthy of the veteran Cheltenham grower. For second place T. Sutton Timmis, Esq., of Allerton, Liverpool, had a nice lot, but there was a decided drop in the quality of the flowering specimens. *Ixora coccinea* *superba* (two examples) were grand plants, but *I. Williamsi* was not sufficiently forward, and a small plant of *Statice* gave the collection an uneven look. *Allamanda Chelsoni*, *Stephanotis floribunda*, and a pair of *Lapagerias* were the next best plants in flower, and some magnificent *Crotons* were also included. Mr. W. Vause of Leamington was an extremely close third, showing smaller, well-flowered specimens, and some fine *Crotons* and *Palms*. There were four exhibitors in this class.

In the class for a group of miscellaneous plants in flower and out, Mr. Cypher was again victorious. A large arch formed the background of the group, a fine *Phoenix* crowning it, flanked by *Cocos Weddeliana*, *Crotons*, *Ferns*, and *Caladiums*. Smaller arches converged towards the front, and these were somewhat similarly treated, but with smaller plants. A mound in front topped by a feathery *Bamboo*, with the *Butterfly Orchid* *Oncidium Kramerianum* peeping out in very natural poise from the branches, was exquisite in conception, and beautifully carried out. Under the centre arch was a fine specimen of *Croton Warreni*, and the centre of the group was charmingly arranged with *Francoa ramosa*, *Lilium speciosum album*, *Caladiums*, and many choice *Orchids*. G. H. Kenrick, Esq., of Edgbaston (gardener, Mr. Macdonald), run the Cheltenham grower very close for second place. In this group the sides or springing of the central arch were treated with the brilliant *Fuchsia triphylla* in a very elegant and telling manner. A series of mounds completed the front, *Bamboos*, *Crotons*, and *Cocos Weddeliana* being used with excellent effect. The pretty old *Oncidium flexuosum* was charmingly interspersed with the *Moth Orchid* and *Cattleya gigas* in the central front mound, *Ixoras*, *Gloxinias*, and a very bright scarlet *Bromeliad* being included in front. Mr. W. Finch of Coventry was third with a bold and striking but rather heavy group. In the centre a large mound topped with a *Phoenix* and flanked with various flowering and foliage plants was used, *Croton Warreni*, *Dracæna Lindenii*, and *Cocos Weddeliana* being the principal plants used outside. Some very fine flowering plants and *Orchids* was a feature of this very striking and handsome group.

G. H. Turner, Esq., Littleover, Derby, was first for the group of foliage plants. Quite a novel and striking idea was carried out here, tall pillar-like plants of *Crotons*, *Bamboos*, *Abutilons*, and *Acalyphas* rising from a groundwork of coloured *Caladiums*, *Mosses*, and other small plants. *Eulalia japonica*, *Asplenium nidus-avis*, *Palms*, and *Bamboos* formed the background of this group, which in effect was as simple as it was striking and beautiful. It was quite refreshing. In this class Mr. Cypher had to take second place, his group being similar in outline to his first prize one in the flowering group. It was a very beautiful group, but somewhat tame and flat in outline, otherwise the plants used in the group were faultless, while the grouping was tasteful, and left little to be desired. For a single specimen stove or greenhouse plant Mr. J. Cypher won rather easily with *Erica Marnockiana*. Mr. Vause of Leamington was second with the same species.

For six *Dracænas*, Lord Harlech, Brogyntyn, Oswestry, was first, showing large and moderately coloured specimens. Capt. L. H. Butler of Shotton Hall, Shrewsbury, was second with fine but uneven plants, the third prize going to Mrs. Darbey of Adcote Hall for small plants. Mr. A. Myers, Sutton Lane Nurseries, was well first in the class for six double *Geraniums*, his specimens being very even, fresh, and well flowered. R. Taylor, Esq., of Foregate was second, his specimens being rather looser and coarser; Mr. Jas. Tarrant was third.

For six single Zonal Geraniums Mr. Myers repeated his success, his plants being far in front of any others in the show; the trusses of flower were immense and beautifully fresh, the plants in the best of health. Mr. Taylor was second.

For three single Geraniums in pots, not exceeding 8 inches, Mr. W. J. Scott of Besford House was first, beating Mr. Barker, whose plants had travelled badly, and these two exhibitors took the prizes in the same order for three double Geraniums in pots of the same size. For three Begonias, Richard Taylor, Esq., was first; J. Scott, Esq., second; and Mr. A. Bateman third.

There were five entries in the class for twelve plants suitable for table decoration, and here Alex. Henderson, Esq., of Boscot Park (gardener, Mr. Bastin), proved the victor; J. Sutton Timmis, Esq., of Allerton, Liverpool, was second, and Lord Trevor was third. A pretty class was that for thirty plants in pots, not exceeding 5 inches. Lord Harlech was first here, among his plants being the pretty old *Vinca rosea alba*, *Dipladenia amabilis*, and some perfect little specimens of *Ixoras*; J. Sutton Timmis, Esq., of Allerton, Liverpool, was second, his best plants being *Allamanda grandiflora* and *Ixora coccinea*, one or two Orchids were also included; Capt. Butler was third. For four Coleus, grown in pyramidal form, there were two entries, and Mr. J. H. Staney, Sunnycroft, Wellington, was fortunate in obtaining first from W. J. Scott, Esq., as there was little to choose between the plants.

Cut Flowers.

Tasteful staging, together with quality in the flowers themselves, were the chief points considered by the judges in the collection of cut flowers. Plant groups, collections of cut flowers, and certain fruit classes are always special features of the Shrewsbury Show. So far as cut flower arrangements are concerned, this year's show has never been excelled, for competition was very keen, and great skill and care was evident on all hands. Class 24 asked for a display of effectively arranged flowers in a space 12 feet by 5 feet. Any design in flowers was admitted, and plants, Ferns, &c., were allowed for greater effectiveness. Orchids were tabooed. The first prize of £15 was accorded to Messrs. Jones & Sons of Shrewsbury from amongst five other entries. Their arrangement was rich and very varied, consisting of huge harps done in white Lilies and Chrysanthemums; crosses with China Asters overlaid with bouquets of white; horse-collar designs in pink, and monster baskets and bouquets of *Lilium longifolium*, *Anthurium spathes*, Sweet Peas in self colours, while in the centre was a bouquet of Smoke Sumach (*Rhus cotinoides*), having also richly coloured Croton leaves and an outer fringe of *Asparagus plumosus*; Lily of the Valley, Rex Begonia leaves, Caladium foliage were also employed. A glass mirror was laid flat on the front portion of the table, and a clean white cloth draped over with Smilax, was hung in front. Messrs. Perkins & Sons, Coventry, annexed the second prize; and Messrs. Tucker & Sons, 14, Magdalen Street, Oxford, came third. The latter had full-sized cushions made of China Asters and fringed with *Statice incana*. Bouquets were posed on the top right-hand corner of these cushions. Designs symmetrical of open books were also included. Baskets of flowers, bouquets, crosses, and huge boxes of flowers were further special features. The five entries were marvels of artistic conception, and no pains had been spared to make the arrangements as interesting as it was possible to.

Messrs. Jenkinson & Son, Newcastle, Staffs, led in the class for a ball or bridal bouquet, having a massive and tasty arrangement of *Odontoglossums* and white *Phalaenopsis*. Messrs. Perkins & Sons were second with a rich arrangement set off with broad mauve ribbons. *Lælias*, *Odontoglossums*, *Oncidiums*, and golden Honeysuckle were all employed. Mr. John Kirk, Stockport, came a fair third.

Messrs. Perkins & Sons were again placed first for a ball or bridal bouquet where Orchids were excluded. Mr. Kirk, Heaton Chapel, Stockport, was second with yellow Roses, *Gloriosa superba*, and yellow Carnations. Mr. W. Treseder of Cardiff was the only exhibitor of a shower bouquet of Cactus Dahlias. Mr. J. Kirk led for a shower bouquet of Roses, and Mr. W. Treseder came second. For a feather-weight bouquet Mr. Kirk again was first, but these were not specially attractive.

The display of pot stove and greenhouse flowers in classes 34 and 35 was not great, yet some fine bunches of choice flowers were put up. T. S. Timmis, Esq. (gardener, Mr. B. Cromwell) was first for twelve bunches, he staging *Clerodendron fallax* (magnificent), *Kalosanthes*, *Bougainvillea Sanderiana*, *Gloriosa superba*, *Lapageria rosea*, *Ixoras*, *Tuberose*, &c.; J. C. Waterhouse, Esq. (gardener, Mr. A. H. Hall), Prestbury, Macclesfield, was a close second.

The baskets of flowers in the decorated classes, together with the florally decorated bamboo stands over a white cloth, were a bright and very attractive feature of tent No. 6. The chief exhibitors here were Messrs. Perkins & Sons, Jones & Sons, W. Treseder, John Kirk, M. V. Seale, and J. C. Waterhouse, Esq. Messrs. Perkins were first for six buttonholes and six sprays for ladies.

Mr. S. Mortimer, Farnham, Surrey, had a marvellously fine set of two dozen Show and Fancy Dahlias, which obtained for him the first award in class 47. His varieties were John Hickling, J. T. West, Jos. B. Service, H. Turner, J. Walker, Victor, Rebecca, A. Rawling, G. Rawling, Spitfire, Virginale, Mrs. Mortimer, Nubian, Duchess of York, J. Saltmarsh, W. Garrett, Duchess of Albany, Emin Pasha, Grand Sultan, and Henry Bond. Messrs. Keynes, Williams and

Co., Salisbury, were a very close second, and Mr. W. Treseder, Cardiff, third.

Mr. Thos. Jones, Penylan, Ruabon, led for the twelve show blooms with an even and very good collection, but poorly set up. W. E. King King, Esq. (gardener, Mr. J. Davis), Bodenhall Manor, Leominster, second; and third Rev. T. Owen (gardener, Mr. W. Seabury), Tedsmore Hall, West Felton. Messrs. Keynes, Williams & Co., led for twenty-four Cactus Dahlias, all fresh, large and without a flaw, except perhaps in the case of one bloom of a seedling variety. Their specimens of *Imperator*, *Vesta*, *Lyric*, *Rosine*, *Mayor Tuppeny*, *Artns*, *Elsie*, *Up-to-Date*, and *Prince of Yellows* were all superb. Mr. S. Mortimer followed as second; and Messrs. Campbell & Sons, High Blantyre, N.B., came third. There were nine entries.

The prize of 30s. as first for eighteen spikes of *Gladioli* was taken by Messrs. Harkness & Son, Bedale, Yorks, but, on the whole, the exhibit was not very superior; Messrs. Gibson & Co., Leeming Bar, Bedale, was second.

In class 43, Capt. T. A. M. Dickin, Wem (gardener, Mr. G. Gilbert), was first with monstrously poor spikes, twelve in number. For twenty-four Roses, single blooms, not less than eighteen varieties, Messrs. D. and W. Croll, Dundee, N.B., were easily first with strong though under-sized blooms. The best were specimens of Mrs. J. Living, *Maréchal Niel*, *Mdme. Eugène Verdier*, *La France*, and *Alf. Colomb*. Messrs. Townsend & Sons, Lower Broadheath, Worcester, were second, and Messrs. Perkins & Sons, Coventry, third. In the confined class (County of Salop), for a similar entry, Dowager Lady Williams Wynne (gardener, Mr. G. I. Squibbs), Oswestry, led with a poor assortment.

HARDY FLOWERS: NURSERYMEN.—Messrs. Harkness & Son, Bedale, were winners for a collection of hardy flowers, there being three entries. We can only say that their group was up to the average in quality, and included *Gladioli*, *Platycodon grandiflorum*, *Chrysanthemums*, *Lathyrus rotundifolius roseus*, *Tritonias*, *Galtonia candicans*, *Phloxes*, &c. Messrs. G. Gibson & Co. were second with a stand comprising much less variety, and too closely arranged. The third prize fell to Messrs. Kerr Bros., Dumfries, N.B., who staged *Anemone japonica alba* in great beauty. Messrs. Harkness & Son again were first for a collection of hardy bulbous flowering plants, having *Gladioli* in great variety, and all good; *Galtonia*, *Tritonias*, and *Liliums*. Messrs. Gibson & Co., Leeming Bar, followed as second.

In class 38, for a collection of Roses, the first award fell to Messrs. D. & W. Croll, who carried off first in other Rose classes. They staged a fine representation of garden Roses, including *Perle d'Or*, *Killarney*, *La France*, *Polyantha White Pet*, *Kaiserin A. Victoria*, *Comtesse Riza du Parc*, *rose-salmon*, and a host of others. Though Messrs. Townsend & Sons' exhibit in the same class was more massive, they yet were placed second, though in their case the blooms were all fair for the lateness and the trying season. Messrs. Perkins and Sons, with a novel, spread-out style of arrangement, in which Brier berries were largely employed, came third. The Rose exhibits were an attractive and pleasant feature.

The Carnation and China Aster classes were poorly filled. Messrs. Clark & Sons, Leeds, won first for two dozen Asters, and for a box of cut Begonias, not to exceed 4 feet by 1 foot 6 inches. Messrs. B. R. Davis & Sons, the redoubtable and well known raisers and growers from Yeovil, Somerset, were easily first; their blooms were large and fine, comprising the newest and best double varieties. For twelve cut blooms of double Begonias, Mr. F. Davis of Pershore was placed foremost. Messrs. M. Campbell & Sons led for twelve Carnations.

W. E. King King, Esq., had a sweet exhibit of Cactus Dahlias, twenty-four blooms, not more than two of a sort. He beat Messrs. Keynes, Williams & Co. in this class (49), though they also staged well.

SWEET PEAS.—The competition for special prizes offered by Mr. Robert Sydenham were very keenly contested, and seldom indeed has a finer exhibition of Sweet Peas been incited or viewed. In class 67, where 30s. were offered as the first prize, thirteen entered, and really magnificent collections were staged. We had bare enough time to make notes before hurrying off at one o'clock on Wednesday, for the judging in the Sweet Pea classes was late. W. L. Chew, Esq. (gardener, Mr. W. Jones), Market Drayton, led, however, in class 67, for twelve distinct varieties arranged in vases with Ferns, *Gypsophila*, &c.; and W. Shropshire, Esq., of Cheswardin Marsh, came next. Their bunches were of great size, and the quality of the flowers of a very high standard.

Mr. Eckford's silver Challenge Cup, valued at 10 guineas, was withheld in class 65, which asked for thirty-six distinct varieties, owing to the poor quality of the flowers and the few entries. The other Sweet Peas classes were well filled, and, on the whole, all were very satisfactory.

There were eight entries in class 36 for a collection of Cactus or decorative Dahlias, or both, any foliage to be used, to occupy a space of 15 feet by 5 feet. Messrs. Keynes, Williams & Co., and Messrs. M. Campbell & Sons, High Blantyre, were placed equal first, and Messrs. Jones of Shrewsbury, were second; the third falling to Mr. M. V. Seale, The Nurseries, Sevenoaks. The groups were remarkably handsome, varied in style, and all had very fine blooms.

Winter Tomatoes.

IT is very easy to write about Tomatoes all the year round, and even give instructions for producing them during the winter months. I have not found that their carrying out to the letter is a certainty, as with me the fruit fails to set satisfactorily during the short dull days of the late autumn and early winter months. Nevertheless, winter Tomatoes, like winter Cucumbers, may be had. The secret is to have at command a low forcing house well heated, properly ventilated, and large panes of clear glass kept scrupulously clean inside and outside. The plants should be secured of the sturdiest character from a sowing made early in August, or even at the middle of that month. Chemin Rouge is the variety that always carries plenty of pollen in the flowers, and if this is kept from becoming paste a certain setting of the fruit is assured. Conqueror also sets well when the atmosphere is sufficiently buoyant. Frogmore Selected is likewise a good pollen bearer, and under favourable conditions—the grand secret—free setting and heavy cropping. Early Ruby must be in the fray for prolificacy and early ripening. Ladybird has special claims for winter work; Comet and Ham Green Favourite, as well as others, are suitable for the purpose. The plants should be raised very thinly in pots or pans on shelves near the glass in a house in succession to either Cucumbers or Melons, admitting air freely as soon as the seedlings appear, in order to have them sturdy, short-jointed, and stored from the very beginning with elaborated substances in a consolidated form. From the pans, or even pots, they may be lifted with some earth and potted into 3-inch pots without experiencing any perceptible check. The plants should be grown on near the glass, and from the 3-inch pots transferred either into the fruiting pots or shifted into 6-inch pots. I prefer the shifting-on system, for this stunts, or rather broadens, the plants, and induces the earliest show for fruit, the point being to keep them near the glass and freely ventilated, even at night, but not allowing the temperature to fall below 55°.

The planting out, if that system is followed, may be deferred until the plants show for bearing, planting in a narrow ridge of good loamy soil about 16 inches distance apart, and train to a single stem, side growths or laterals being rubbed off while quite small. Fruiting in pots is the better plan, 10-inch or 11-inch pots being quite large enough, allowing room when potting for about one-quarter the depth of the pots for top-dressings. Rather firm potting is advisable, the drainage being thorough but not excessive. Arrange the plants on a bed of ashes about 16 inches distance apart, and provide a stake for each plant, and secure the stem to it as required. Water should be given rather sparingly, for the evaporating conditions are not great in the late summer and autumn months, the tendency being to too free rather than too little growth. Flagging is not advisable, but a little limpness of leafage does no harm—rather conduces to a floriferous habit; and if the trusses of bloom are smaller in consequence the fruit sets all the better.

When the first flowers show colour a more airy and drier atmosphere should be maintained, and even with these conditions it is advisable to have recourse to artificial fertilisation. Cross-fertilisation often proves effective where self-impregnation, or pollen from the individual flower, is impotent; indeed, pollen from a different flower on the same plant often proves effective on another blossom, while on its own the setting of the fruit is very indifferent. I think Mr. W. Iggulden first drew attention to this fact, at least advised the rubbing of the fertilising parts of the flowers together, each bloom thus being made to assist its neighbour. In the case of shy setters, not any service for winter, or where there is a deficiency of pollen, the pollen of a more free setting variety should be used. The pollen should be collected on a sheet of white paper, and a camel's-hair brush laden with it, and then applied to the pistil of the flower on a fine day, or when the flower is fully expanded about noon. Lightly tapping the footstalks of the flowers may answer where the pollen is abundant, but it does not answer to trust to chance, or even where the pollen falls freely when the footstalks of the flowers are sharply rapped, artificial fertilisation and, better still, cross-fertilisation being resorted to. Partial impregnation means irregular swelling fruit, for unless the proper complement of ovules are impregnated, or seeds secured, the fruit will not attain perfection, swelling more or less irregularly, and the quality correspondingly injuriously affected.

As regards topping the plants, this may be done at the joint beyond the second bunch of bloom, allowing one strong shoot from each plant pushing above to develop another bunch of flowers. Top-dressing will assist the swelling of the fruit, but it should be deferred until the first bunch of bloom has set. Turfy loam and half-rotted manure, preferably cow-yard, in equal parts, with a quart of a mixture in equal proportions by measure of air-slaked lime, wood ashes, and soot to each bushel of compost. If warmed, and then put on a couple of inches in thickness, it is quickly taken possession of, both by ascending

roots and also those still stronger which are emitted by the stems; the plants thereby receive much benefit at a time when support is most needed. A second top-dressing, applied when the clusters of fruit of the second setting, or those following on the topping of the plants, are set, will suffice for the completion of the crop.

A temperature of 55° to 60° by night, increased to 65° or 70° by day, with 80° from sun heat, closing early so as to increase the temperature to 85° or 90° for a time, is suitable for winter Tomatoes. Ventilation is very important, a "crack of air" constantly being advisable at the top of the house, and a free circulation, especially in the daytime when the weather permits. When the fruit nears ripening, or when changing colour, a moist atmosphere must be avoided, or the fruit may crack. Where there is this tendency less moisture should be afforded, both in the atmosphere and at the roots, and the fruits having the slightest indications of cracking should be cut and ripened off the plants on shelves.

As regards watering, keep the foliage fresh, always keeping on the dry rather than the wet side in the case of winter Tomatoes. Liquid manure may be given once a week after the fruit is set and swelling, but discontinuing it when the fruit commences to ripen. Sufficient atmospheric moisture will be present without recourse to damping down, though on fine days sprinkling the paths, beds and walls may be practised in the early afternoon.

White fly is sometimes troublesome, also aphides, and not uncommonly red spider. Vaporisation with nicotine compound is effective against aphides, and deterrent of white fly and red spider. For these pests, however, a little sulphur brushed on the hot-water pipes after forming into a cream with skim milk, is most satisfactory in results, and the fumes given off also act well against fungoid germs.—G. A.

The Vine of Auchmore.

EVERYBODY has heard of the Hampton Court Vine, and most people know there are several big Vines in various parts of the country; but it may be news to many to be told that one of the largest, and perhaps the best, flourishes at the foot of the Grampians, near the middle of Perthshire.

Auchmore, one of the seats of the Marquis of Breadalbane, is situated at the west end of Loch Tay, about a mile from Killin village. The mansion is a fine new building, with a beautiful conservatory attached, and is surrounded by a nice flower garden. The kitchen garden and glass is perhaps half a mile lower down the hillside—a pleasant spot in the midst of a pleasant land in the pleasant summer time. The Vine occupies a lean-to house 170 feet long, running along the outside of the south wall; and from the trunk, which is 6 or 7 inches through, there extends a branch each way to the ends. From these the usual rods run up at regular distances. The crop this year (about the usual one) consists of over 500 bunches, ranging from about 1 lb. to 3 lbs. in weight; probably the average may be well on to 2 lbs. The time of our visit, middle of July, the fruit was about half coloured, and looked excellent in every way. Where a young rod had been taken up to replace an old one, it was strong enough to be considered a capital case if grown in the usual way.

This Vine, a Black Hamburgh, is said to have been planted about 1832 by one Robert Gardiner in a much smaller house. Possibly its first advances to greatness may have been the result of something like accident, but certainly the keeping of it in its robust health and fertility for twenty-five years, as Mr. Cant has done, is by no means accidental, but involves the best of cultural skill and attention. In these days it is difficult to make records, but if there is anybody else who has gathered, say, 10 tons of Grapes from one Vine, many might be interested to hear of him. The extension system carried to such a length may not appeal favourably to many, being too much a putting of eggs in one basket; but the jolly old Vine of Auchmore is not only worth a visit, but well worth study. That there are cases where the system might be profitably adopted is, we think, certain. Needless to say the natural soil of Auchmore is good and suitable for Vine growing; and where that is the case, and it is not convenient to root out an old vinery with the usual number of occupants, the roots of one of them might be sent farther afield to new pastures by extending the branches.

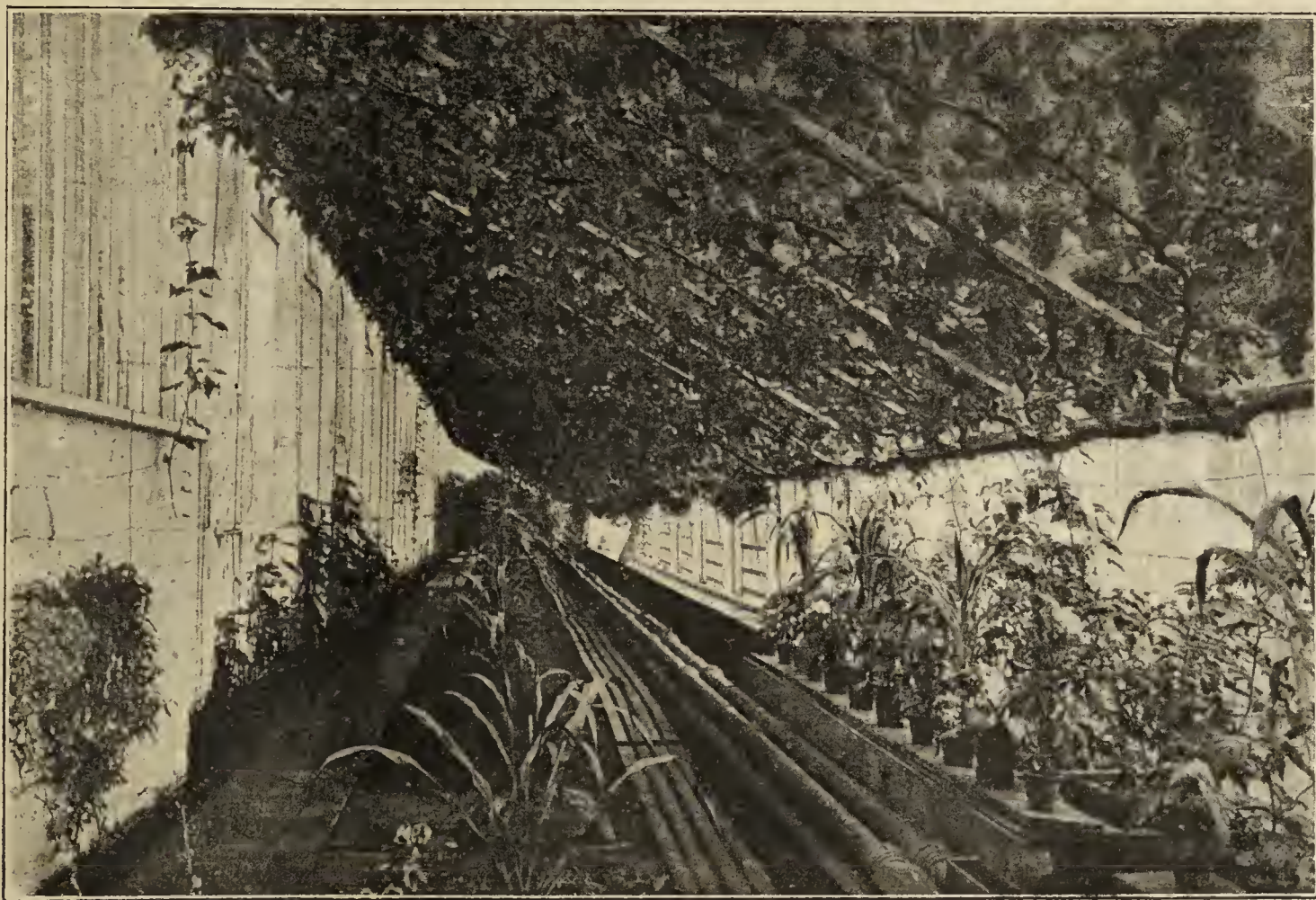
By the kindness of the Marquis the gardens at Auchmore are open to the public on Wednesdays, and the Vine, although the principal, is by no means the only object of interest. The country round Killin is picturesque and beautiful. The River Dochart, seen from the bridge just outside Auchmore gate, acres of rock, with little streams murmuring over it in dry summer, acres of angry foam in a winter spate, and Ben More towering in the distance, are scenes not to be forgotten. A little farther north the Lochy glides smooth as a mirror through green fields, to meet the Dochart just before they enter Loch Tay.—C. M.

"Waste Not, Want Not."

A LARGE meeting of fruits and vegetables was held on the evening of the August Bank Holiday at the Globe Artichoke, Pine Apple Row, London, to take into consideration the sewage of London and the amalgamation of the Irish charred peat with it; His Highness the Black Jamaica Pine-apple, President, in the chair, supported on his right by the Royal Sovereign Strawberry, and on the left by His Royal Highness the Prince of Wales, son of the former. The vice chair was filled by the noble, healthy, and luxuriant Mr. Cabbage, from Reading, supported on the right by Mr. "Perfection" Cucumber, and on the left by Mr. Celery, from Wordsley.

The President rose and said, "Mr. Vice and brother gentlemen, this is not the first time that I have appeared before large assemblies; but I assure you that it is the first time I have ever met to discuss the present large and momentous question regarding more food for

Mr. Onion rose, and said that "he had long understood that his friends in England throw all their best vegetable food down drains, while in his country every drop of liquid and every bit of solid are saved, and put on to the ground. The President tells us that his acquaintance with liquid manure only goes back a very few years. In my country we can go back to three or four hundred years. Every woman in our country knows the value of what you call filth or waste, and saves it up as if it were gold; and so it is, it is the soil's gold (loud cries of hear, hear). I ask you, when your master gets a sovereign, does he throw it into a waste drain? (Laughter, and "I wish he may get it" from Mr. Gherkin, of Bedfordshire.) Manure in any shape to the land is like gold dust to the owner. The owner cannot flourish without money, nor can the earth unless it receives a fair proportion of organic food, which in our country we call *humus* (hear, hear). If the land is poor in *humus*, you may expect a shabby return from it (hear, hear). Here am I, gentlemen, as a fair specimen of my country, weighing nearly four pounds (laughter). Look at my English brother opposite. Why, he has not arrived to three-quarters



THE VINE OF AUCHMORE.

our now increasing wants (hear, hear). I wish every one of you to give all the information you possess to this very important meeting concerning liquid manure and charred peat as a food for your families before we separate, as most of us will have to attend another large meeting in Covent Garden to-morrow morning (hear, hear). In the first place, I shall give my little experience with liquid manure, and it is now some years ago since my family became acquainted with that splendid liquid food; and it was pretty strong, too, as it flowed from cow houses, piggeries, stables, and the like. This was at Aldenham House, Elstree. We kept as a profound secret what we were fed upon, for in those days our best friends would not even shake hands had they known what luxurious food we lived on (great laughter). Until then we never weighed more than two pounds. Look at me now (hear, hear, and great cheering from Mr. Melon). Therefore I say, brown stout for ever (roars of laughter). At table I often laughed when observations used to be made at seeing such a large fat fellow. 'No go,' says I, 'I must not divulge the grand secret.' I only laughed behind my crown (a significant nod from Mr. Spanish Onion, with general cheers). This was the commencement of liquid food with my illustrious family."

The President then sat down with great applause, followed by general cries for Mr. Vice and Mr. Spanish Onion.

of a pound (roars of laughter). Excuse my broken English, gentlemen. Did you think we are a different sort? Not a bit of it; dissect us both, and you will find just the same number of scales or envelopes, for he is descended from the Onions of Spain. Why, my brother is completely starved for want of organic matter. It is true we kept the thing a profound secret, not only because we were making a good thing of it (laughter), but, as the President said in his case, people would have nothing to do with us had they known what sort of food we were fed upon (great cheering). I can assure you, gentlemen, I feel a lively interest in this great meeting, and seeing in the English papers that Mr. J. J. Willis (?) had lectured the Board of Health, and thinking that that board might be composed of some of the vegetable kingdom, as some one said they had *wooden heads*, I came over to assist my English brothers in this great undertaking (immense cheering); but, to my great surprise, I find that that board is composed of linen-drappers, tailors, shoe-makers, barbers, and the like (roars of laughter), evidently not the right men in the right place (tremendous cheering). In conclusion, I do hope that we shall be able to show to the world that all towns make an immense quantity of rich manure, whether solid or liquid, and that it ought not and must not be thrown into the sea" (tremendous applause).

(To be continued.)

Shrewsbury Show.

CONTINUED FROM PAGE 173.

Fruit.

DESSERT TABLE.—There were four tables in class 72. Mr. G. Mullins, gardener to Lady Henry Somerset, Eastnor Castle, Ledbury, won the coveted honours with an admirably arranged collection. A bunch each of the Duke of Buccleuch, Muscat of Alexandria, Black Alicante, and Black Hamburg Grapes occupied the middle of the table, suspended on two wicker handled baskets draped with Ampelopsis Veitchi, the Grapes being remarkably excellent; also Stirling Castle, Barrington, Bellegarde, and Grosse Mignonne Peaches, all extremely well coloured and large; Pineapple, Stanwick Elruge, Lord Napier, and Pitmaston Orange Nectarines on par with the Peaches, Brown Turkey Figs, Hero of Lockinge and a seedling Melon. Arranged on either side of the baskets of Grapes were three trumpet glasses arranged with Montbretia and Francoa somewhat profusely, but with an elegant accompaniment of sprays and a dozen small Lycopodium, &c., glasses with Lily of the Valley, Gypsophila, and Ferns. Altogether it was a most attractive exhibit, obtaining a maximum of 115 points. The second prize was awarded to Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., M.P., Hutton Hall, Guisborough. His fruits in general were relatively larger than those in the first prize collection. A large bunch of Gros Guillaume, with a beautiful bloom suffusing the berries, Foster's Seedling, Black Hamburg, and Buckland Sweetwater Grapes were similarly arranged as in Mr. Jordan's exhibit. There were also good dishes of Violette Hâtive, gigantic Golden Eagle, Sea Eagle, and Princess of Wales Peaches, Spencer, Lord Napier, and Pineapple Nectarines, very fine and well ripened Doyenné du Comice Pears, large early Apricots, Yorkshire Beauty and H. W. Adnitt Melons comprised the collection. An elegant arrangement of sprays of Heuchera ignea, with Asparagus and Gypsophila paniculata, &c., were most tastefully placed, and completed this beautiful display. The table secured 112, only three points less than that of the first prizewinner. The third prize was awarded Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle. His collection comprised fine examples of Canon Hall and Muscat of Alexandria, Madresfield Court and Muscat Hamburg Grapes, a fine dish each of Spencer and Elruge Nectarines, all highly coloured; Brown Turkey Figs, Royal George Peaches, Ribston Pippin and Lady Sudeley Apples, Sutton's A1 and Countess Melons, and Dr. Jules Gnyot Pears, and fetched 105 points. The fourth prize fell to Mr. Jas. Tullet, gardener to Lord Barnard, Raby Castle, Darlington, with excellent and uniformly sized fruits, and had 95 points.

There were six contestants in the class (73) for twelve bunches of Grapes, the competition being extremely keen. Mr. R. Cairns, gardener to Jas. Martin White, Esq., Balruddery, Dundee, was awarded the coveted first honours. He had four very large bunches of Muscat of Alexandria, with well-ripened, medium-sized berries; two large bunches of Madresfield Court with well coloured fine berries; two superb exhibits of Gros Maroc with large and highly finished berries; two grand bunches of Alnwick Seedling with well-finished berries, and beautiful examples of Black Hamburg, obtaining a total of 96½ points. The second prize was secured by Messrs. D. & W. Buchanan, Kippin, Stirling, with three grand bunches of Black Alicante, weighing respectively 8 lbs., 6½ lbs., and 4½ lbs.; two bunches of Cooper's Black, respectively 4½ lbs.

There were only two exhibitors in class 75, for twelve dishes of fruit, distinct varieties. The prize was awarded to Mr. F. Jordan, gardener to J. Corbett, Esq., Impney Hall, Droitwich. The collection contained two fine bunches of Gros Maroc, but the large, even sized, and well finished berries were slightly rubbed; also two well ripened good bunches of Madresfield Court, two bunches of Muscat of Alexandria, and two of Trebbiano, both fine in berry and well ripened; a large bright yellow-skinned Eastnor Castle Melon, Violette Hâtive Peaches, Brown Turkey Figs, Morello Cherries, Green Gage Plums, Violette Hâtive and Elruge Nectarines, a dish each; and Moor Park Apricots. The second prize fell to Mr. T. Banner of Blithfield, who had beautifully finished Gros Maroc Grapes, large both in bunch and berry; Muscat of Alexandria, not so evenly finished; Hero of Lockinge and Royal Jubilee Melons; Violette Hâtive Peaches, richly coloured Pitmaston Orange Nectarines, Kirke's Plums, Pitmaston Duchess Pears, and Worcester Pearmain Apples, highly coloured.

Mr. C. Roberts, gardener to Mrs. Swann, Halston Hall, Oswestry, was placed first in class 76. The collection included good examples of Buckland Sweetwater and Black Hamburg Grapes, very fine Alexandra Noblesse Peaches, Chaumontel Pears, Gathrie's Gage Plums, Lord Napier Nectarines, Moor Park Apricots, Sea Eagle Peaches, and a Melon. The second place was accorded to Mr. W. Phillips, gardener to T. F. Kynnersley, Esq., Leighton Hall, Trowbridge, with well ripened Muscat of Alexandria and Black Hamburg Grapes, and Peaches, Nectarines, Figs, Apricots, Melon, and fine Jargonelle Pears; and third to Mr. S. Bremmell, gardener to H. H. France Hayhurst, Esq., Overley, Wellington, Salop, his Alnwick Seedling Grapes being very fine.

There were seven entries for a keenly contested trial, and Mr. T. Bannerman, gardener to Lord Bagot, Blithfield, Rugeley, Staffs, ran off with the first prize for compact bunches of Gros Maroc, with large and even sized berries covered with a beautiful bloom, and well

ripened, amber coloured berries of Muscat of Alexandria. Second, Mr. A. H. Hall, gardener to J. C. Waterhouse, Esq., Bestbury, Macclesfield, with fine examples of Madresfield Court, and finely ripened, well thinned, large berried Muscat of Alexandria. Third, Mr. T. Lambert, gardener to Lord Harlech, Brogyntyn, Oswestry, for large bunches, but somewhat small, though well coloured berries of Black Hamburg.

In class 79 there were ten entrants, the first prize being adjudged to Mr. W. Dawes, gardener to Lord Trevor, Brynkinalt, Chirk, with finely coloured large berries; second, Mr. J. Langley, gardener to the Rev. T. M. Bulkeley Owen, Tedsmore Hall, West Felton, with smaller berried, compact bunches; third, Mr. R. Cairns, Balruddery, Dundee.

There were five entries, the first prize falling to Mr. A. H. Hall, Prestbury, with grand and compact examples of beautifully finished Madresfield Court; second, Mr. J. Langley, of Tedsmore, with larger bunches of well-finished berries; third, Mr. L. Barton, gardener to T. R. Twenston, Esq., Pentswood, Market Drayton.

The class for Black Alicantes brought six exhibitors, all with very fine examples in every respect. The first honours were accorded Mr. W. Shingler, gardener to Lord Hastings, Melton Constable Hall, Norfolk; second, Mr. W. Langley, and third, Messrs. D. & W. Buchanan, Kippin, Stirling.

There were eighteen dishes of Peaches, highly coloured and fine fruit. Finely coloured examples of Dymond won the first prize for Mr. R. Dawes, gardener to the Hon. Mrs. Meynell Ingram, Temple Newsam, Leeds. Second, Mr. R. Grindrod, gardener to G. J. Bates, Esq., Waitfield, Hereford, with highly coloured Bellegarde; and the third position to Mr. John Wilkes, gardener to Mrs. Meakin, Cresswell Hall, Staffs.

Vegetables.

The vegetable classes opened out a strong and highly interesting feature, especially to the more "economically" inclined. Mr. W. Pope, gardener to the Earl of Carnarvon, Highclere Castle, Newbury, obtained the first prize in a class of 124 for twelve distinct kinds. An exhibit of Onions, Cauliflowers, and Carrots more magnificent or beautiful could not be produced. He had thirteen handsome Ailsa Craig Onions, firm and very large; also Sutton's Ideal Potato, Hollow Crown Parsnip, Blood Red Beet, Best of All Runner Bean, Solid White Celery, Autocrat Pea, Early Snowball Turnip, Everyday Cucumber, and Sutton's Perfection Tomato. Mr. R. A. Horspool, Llangotton Road, Ruabon, was second, though perceptibly behind the first prizeman, and the Earl of Lathom (gardener, Mr. B. Ashton), Ormskirk, made a good third.

The classes for dishes of Potatoes, Cucumbers, French Beans, Cauliflowers, Onions, &c., were more or less keenly competed in, and some very creditable produce was placed on the tables. In the case of French Beans Mr. F. J. Lowe, of Mount House, Shrewsbury, led first out of twelve other entries. For Runners the Earl of Lathom staged the finest dish, and here there were twenty-three entries, and all good, so that the judges had to employ their keenest observation in adjudicating here. Mr. G. Davis, West Felton, won for three Cauliflowers; and G. F. Ward, Esq. (gardener, Mr. J. Clowes), Hadnall Hall, for three heads of Celery, in which there were a score of competitors. From amongst twelve who staged six Parsnips each, Col. O. R. Middleton (gardener, Mr. W. Leith), The Chase, Ross, annexed the first award. Parsnips, however, were not so fine as we have seen them, although the first half dozen were over 36 inches long, even and smooth. Carrots were exceedingly good, though not very numerous. W. L. Crew, Esq. (gardener, Mr. W. Jones), Drayton, won for the half dozen, his roots being pretty, stout, and smooth. Lord Trevor had the finest dish of Turnips, and it was noted that they were almost the smallest in the whole array; the form and finish, however, was excellent. Onions were a very varied lot, and here Lord Aldenham's gardener (Mr. E. Backett) easily led for nine spring Onions with Sutton's Ailsa Craig. His bulbs were really immense, and very handsome; and for nine autumn Onions Lord Trevor had the premier award. G. F. Ward, Esq., won for three heads of Celery in class 141.

Messrs. Sutton & Sons, Carter & Co., Webb & Sons, and Ed. Murrell offered special prizes, respectively, for collections of vegetables. The principal exhibitors whose produce carried off the leading honours were Lord Aldenham (gardener, Mr. E. Backett, first in class 108), with a specially fine collection, R. W. Hudson, Esq. (gardener, Mr. J. Gibson, second), Danesfield, Marlow, also with a grand display; and the Earl of Carnarvon third. Lord Aldenham led again in class 111 (Webb's), Earl of Lathom second, and A. Henderson, Esq. (gardener, Mr. W. L. Bastin), Faringdon, Bucks, third. For Carter's prizes the winners with collections of vegetables were: first, Lord Aldenham; second, A. Henderson, Esq.; third, Earl of Lathom. There is something that might be said in protest against the practice of the same exhibitors entering different nurserymen's classes.

Miscellaneous Exhibits.

Messrs. Webb & Co., Wordsley, Stourbridge, filled about 50 feet of tabling with out flowers, Gloxinias, and vegetables. The latter were all very even and fine, the Carrots being especially smooth, clean, and good. For the time of year also the Gloxinias (Webb's Exoelsior strain) were showy. Long sprays of Asparagus Sprengeri and Begonia Gloire de Lorraine over a black background added lightness and grace to this huge exhibition.

Mr. Edmund Murrell, Portland Nurseries, Shrewsbury, staged Tea Roses in boxes, and quite a number also in pots, backed with foliage plants and fronted with Ferns.

Mr. John Wood, nurseryman, Penrith, had cut Dahlias and Sweet Peas, and also a fine dish of his new dwarf golden French Bean named "Centenary." From Messrs. Dicksons of Chester came a large collection of Phloxes, including such fine varieties as Avalanche, Fedora, rose-pink; L'Avenir, Alex. Shearer, Felibre, reds; and Iris, violet coloured. Amongst other cut flowers they had Lilliums, Romneya Conlteri, Tritonias, Hydrangeas, Gladioli, Papavers, Enocheras, and a number of choice foliage plants. The group was extensive and carefully arranged. Mr. H. Deverell from Banbury, not far off, had sent a very fine assortment of cut herbaceous flowers. Rudbeckia purpurea and others were prominent, together with Lythrum Salicaria rosea, Phloxes, Erigerons, Lilliums, Acanthus or Bear's Breech, Hypericum calycinum, Veronica clethroides, Asolepias tuberosa, Helenium autumnale striatum, and such other showy subjects.

Pentstemons were set up by Messrs. Dobbie & Co., Rothesay, N.B., including in all fifty-three varieties, covering a space of 25 feet by 5 feet broad. The exhibit was something new, or at least had freshness about it even for a Shrewsbury Show. The spikes were long and well flowered, having wide, open, bell-like flowers of great brilliancy. Of the more distinctive varieties was Auguste Cain, Legende, Dr. Chantemesse, Ambroise Thomas, M. Donnett, W. Cuthbertson, Miss Willmott, Baden Powell, President Carnot, Aubur, Captain Marohand, Tom Burnie, and Loregon Larchy. Relieved by the gracefully recurving foliage of Cocos and Eulalia, and fringed in front with Statice, the exhibit was highly attractive. Mr. Geo. Towndrow, Malvern Link, staged an immensely effective table bearing a new variety of Zonal Pelargonium named Beauty. The flowers are brilliant scarlet, an excellent bedder, good for winter flowering, and very robust and free in growth. It is a real good sort.

A tasty group consisting of Sweet Peas, Pompon Dahlias, Lilliums, and Hydrangeas, with Adiantums between, were arranged by Messrs. Jones & Sons, Sweet Pea and Dahlia specialists, Shrewsbury. Needless to say the newest and finest varieties were included.

What were denoted "the wonderful Japanese Pigmy Trees," from Messrs. Pritchard & Sons, florists, Shrewsbury, were forward, and created a deal of attraction. Further south, where these have been repeatedly seen, their novelty and attractiveness has passed, yet for some purposes they may lend a useful presence. The collection in this instance was more varied than we have formerly seen such exhibits.

Messrs. Rivers & Son, the noted fruit-growers from Sawbridge-worth, Herts, were forward with a very handsome exhibit of fruit trees in pots. These were shown as bush-trained specimens, and included Degmar and Crimson Guillaume Peaches, Dryden Nectarine, Transparent Crab, loaded with fruit, pot Vines, heavily laden, together with Cherries, Plums, Pears, and a splendid specimen of Peasgood's Nonesuch Apple in a 12-inch pot, bearing eight huge and well-coloured fruits. Special attention was directed to a central specimen Peach of Crimson Guillaume in a 15-inch pot, and standing fully 9 feet high; the tree, a finely shaped young specimen, upwards of a hundred fruits over average size and perfectly finished. In front of the pot plants were trays of Apples and other fruits, and some splendid specimen bunches of Muscat and other Grapes. The whole feature was one of the most attractive in the whole show. The King's Acre Nurseries, Ltd., King's Acres, Hereford, had an honorary exhibit of Apples and other fruits, with Tea Roses in the background.

Mr. J. H. White, F.R.H.S., Worcester, set up a very worthy group of hardy cut flowers and fruit. The Strawberry, Raspberry, and Japanese Wineberry were also shown laden with fruits. He also staged Petunia Brilliant, a dwarf and prolific bedding plant. Many varieties of Apples were shown in front, and boxes of selected Cactus Dahlias had also a place. The hardy flowers were all select, and proved to have been carefully taken in the beds or borders.

Hobbies, Ltd. (Mr. J. Green), of Dereham, made a very fine display of Sweet Peas, Dahlias, Gloxinias, and other popular flowers. That beautiful Sweet Pea Miss Willmott was represented by a large number of bunches arranged in pyramidal form, as were one or two others of the newer varieties. Some hundreds of bunches separately named were also shown. Two large pyramidal mounds of Gloxinias, set up with a pale blue Statice and Gypsophila, were very striking and pretty, and the Dereham strain of this popular plant is evidently an excellent one. Chrysanthemums appear to be very early this season, and these, with a number of hardy herbaceous flowers and Roses, were also included. Rosa rubrifolia has very pretty reddish foliage, and should be a fine thing for cutting for bouquets. The quaint R. viridiflora was shown here, and a number of Tea and hybrid Roses in fair condition, considering the season. The main feature was the magnificent display of Cactus and other Dahlias for which the firm are noted. Scores of handsome varieties were shown in the usual pyramidal bunches, and it is pleasing to note how few of the heavy petalled sorts are now brought forward. Nearly all have the fine, thread-like petals, slightly incurving at the ends, while the colouring in all is superb. Lord Roberts is a magnificent creamy white variety, shading to yellow in the centre. Flamingo is a remarkably bright scarlet, while Floradora, J. W. Fife, Baden Powell, Artus, Gaillard, and J. W. Wilkinson are all excellent in their respective colours. Small plants and Ferns were prettily arranged between the flowers, the back being finished with

Cocos Weddeliana, altogether a charming and creditable exhibit. Messrs. Hinton Bros. of Warwick Nurseries, Warwick, had a very fine exhibit of seventy-four bunches of Sweet Peas, all distinct. They were all perfect in colour, not a weak or second-rate bunch being included. Royal Rose is a superb flower, clear and well defined; Triumph is also good, that pretty venation of the standard being well displayed; F. A. Hinton is a charming hooded variety, flaked with crimson on a rosy white ground, and Chancellor, Mars, Lovely, and Agnes Hinton are all worthy of praise. Indeed, in this group it is difficult to single out any, for all are exquisite, and the effect of the flowers is heightened by the excellent method of staging adopted by Messrs. Hinton. Long tubular metal holders, that come apart for storing or packing purposes, kept the bunches well off the stage, this being draped with a yellow material, a few sprays of foliage being placed on it.

The veteran Mr. H. Eckford of Wem always shows well at Shrewsbury, and his fifty or so bunches of Sweet Peas were set up in a very light and graceful way. They were in long glasses, and arranged with a few ornamental Grasses, not enough to take from the Sweet Peas, but just sufficient to prevent any flatness. Mr. Eckford's flowers are singularly fresh and bright for the season, the long stout stems showing plainly that they are from vigorous healthy plants. The popular Blanche Burpee, Gorgeous, Gaiety, Lord Kenyon (a grand thing), Royal Rose, and Countess of Powis were among the best shown. Mr. Eckford has evidently not forsaken his old love the Verbena, some charming bunches of this showy plant being exhibited together with some excellent Cactus Dahlias.

Messrs. Jarman & Co. of Chard had a meritorious exhibit of vegetables and cut flowers. Of the former, Somersetshire Hero Onion is well worthy of note, the bulbs being of immense size, and apparently very heavy and firm; Exhibition Carrot, Al Bean, Matchless Potato, and Improved Hollow Crown Parsnip were among the best dishes, and they were all attractively set up. Among the flowers we noted some excellent Dahlias, Roses, and Gladioli in all the most popular varieties, but too much had been attempted in the group, and in consequence it had rather a jumbled appearance. Some very fine double Begonias were included, but they were rather travel-stained.

The Edwardian table and room decorations, by Mr. Arthur Edwards, of Arnold, Notts, were very pretty, and covered some 20 feet of staging. The vases and epergnes are very light and graceful, making the work of the decorator very much more simple and effective than with the older forms of receptacle.

Mr. S. Mortimer of Rowledge, Farnham, showed Cactus and Show Dahlias in his usual inimitable form. From our report of the competitive classes it will also be seen that the quality of his blooms was high to have secured for him the honours he captured.

Messrs. John Peed & Sons, West Norwood, had a very fine bank of plants, consisting principally of their specialities in Caladiums, backed up by Bamboos and a few pieces of Cocos Weddeliana. Caladium Roncador is a very fine thing, with immense dark rose leaves, with deep green veins. Oriflamme is a lovely species, the whole of the centre of the leaf a very brilliant flaming red with a green margin. Princess Royal has light green shaded leaves, with bright red veins; and Mrs. Thos. Peed has a red centre, with shaded green margin. W. E. Gladstone is a very brilliant red, and many others equally good may be named. About seventy-five plants, all of specimen size, were shown, and prettily grouped with Adiantum cuneatum, the front finished with Caladium argyrites and Eulalia japonica.

Messrs. B. R. Davis & Sons of Yeovil set up an effective group of Begonias which fortunately were not crowded, as is usual with this class of exhibits, as a consequence each plant and flower could be distinctly seen, and very good they all are. The pure white Masterpiece, General Baden Powell, scarlet, Marchioness of Bath, and a number of unnamed seedlings were the cream of the double varieties, and many of the singles were exquisite. Miss Gladys Harkness, red with a white centre, is very distinct. Pallas is a very bright scarlet, as is Lord Kitchener, one of the most brilliant in the group.

Messrs. R. Smith & Co. of Worcester had a very large and effective group of plants and cut flowers, comprising fine Lilies in variety, Crotons, Bamboos, and a few Clematises. Fine bunches of ont Montbretias, Phloxes, Delphiniums, and plants of the Golden Cypress were shown in front. Rudbeckia fulgida is a very fine perennial, with long, drooping, yellow florets, and a coppery tinted cone. Eupatorium purpureum, Eucomis punctata, Rudbeckia maxima, and Statice eximea were also shown, and some fine flowers of Nymphaea chromatella, Ellisiana, and Sulphureum. Other and finer forms were included, but were hardly open at the time of visiting, a wise precaution, when the heat of the tents was considered.

Mr. Albert Myers, Sutton Lane Nurseries, Shrewsbury, had an immense and imposing display of Zonal Pelargoniums, in pots and as cut blooms, together with Coleus and other useful decorative plants. Messrs. Gunn & Son, Brookfield Nursery, Birmingham, staged Phloxes in very liberal array, together with handsome Delphiniums and other hardy border plants.

From Leopold de Rothschild, Esq. (gardener, Mr. J. Hndson) Gunnersbury House, Acton, London, came a very handsome vase of the blue Water Lily (Nymphaea gigantea), also Amaryllis Belladonna maxima and Sagittaria japonica, fl.-pl.

A Lily-Pond Garden.

THE present view of the Water Lily pond in the Earl of Ilchester's beautiful and interesting garden at Holland House, was of necessity held over when the gardens were described and portrayed in our spring number of March 14th, this year. The Lily-pond is seen in the centre, and consists of a shallow oval basin of considerable dimensions, and contains *Nymphæas*. A very much larger and more imposing basin, with fountain, has just been completed on the south front of Holland House, from a design by his lordship's head gardener, Mr. Charles Dixon. The be-foliaged tower in the angle of the view presented on the next page forms an attractive architectural feature, which is readily noticed from almost any part of the grounds on the northern side. From it a splendid view of the handsome demesne, surrounded by lawns, shrubbery belts, trees, plant borders, rock gardens, and the old Dutch garden can be obtained. The beds and borders, also shown in the illustration, are filled in summer with the ordinary bedding plants, and suitable spring flowering subjects occupy them during winter. The *Wistaria* will be observed scrambling profusely over the columnar arches supporting the tower, and the Lime tree arches are seen meeting it at right angles. Numerous busts of celebrities during the reigns of the Charleses adorn the walls of an open-air corridor facing the tower, and running parallel with the archway just mentioned.

Clematis Culture.

I THINK few plants have yielded such a glorious harvest to the hybridiser as this genus. They are all really fine plants, and what will interest amateur readers most is the fact that they are perfectly hardy and well adapted to the cottager's garden, and will grow with equal vigour in town and country. *Clematis Jackmanni* was a complete surprise to me one year, for all the flowers were of an immense size, and nearly all had six petals instead of four, which adds in no small degree to its beauty.

It is as adjuncts to town gardens that I wish particularly to direct attention to the hybrid *Clematis*, for in such positions they cannot fail to be seen and appreciated by everyone. First plant a number of the small leaved *Ivies* or *Ampelopsis Veitchi*; either of these will attach themselves closely to the wall, and each will have distinct claims to the notice of plant lovers. The *Ampelopsis* will clothe the wall with its deep green leaves, which in the autumn will assume rich and brilliant shades of colour, but the wall will be left bare in the winter; but in the case of the *Ivy* the wall will be clothed with green all the year.

Whichever be chosen, care must be taken to keep the plants pruned and trimmed close to the wall; over this covering the *Clematis* should be trained, and the rich green background will add materially to the beauty, and quite cover the blank wall, which the leaves of the *Clematis* alone would not do.

The *Clematis*, however, need not be confined to the single purpose of covering walls, for they are equally adapted for training on a verandah, porch, or trelliswork; or they may be trained upon pillars and festooned together. In this way I have grown many varieties with great success, and amongst others those depicted on page 181, which are *C. rubra*, *marmorata*, and *Fair Rosamond*. The latter, as may be seen from the engraving, is a fine flower. It is a bluish white in colour, and has a wine-red bar extending from the base of the sepals nearly to the apex. It is very free blooming, and may be considered to be one of the best in cultivation.

Again, for scrambling over ruins, rockwork, natural or artificial, they are excellent, and equally at home. Another use to which they may be applied is for massing in large beds on the lawn, where they soon cover the soil, and with a little attention produce an astonishing effect. Indeed, I may sum up their good qualities in these words—they are perfectly hardy, quick in growth, require but little attention, may be purchased reasonably from Messrs. Richard Smith & Co., Worcester, and yield a profusion of large flowers of rich and varied hues, which continue in full perfection for several months.

To insure success with these *Clematises*, plant them in a mixture of good turfy loam, well decomposed leaf mould, and some thoroughly decayed manure; let this compost be turned frequently with a spade to insure its becoming thoroughly mixed, and in spring, when vegetation is reviving, give a good mulching of manure and leaf mould. During the flowering season they should enjoy occasional waterings with weak liquid manure.—F.



Rose Cogitations.

THE pruning of climbing, pillar, or what are more generally known as "garden" Roses, is one of the most important of details to attend to in the obtaining of success with this charming section. The point at the start of growth is to induce the plants to push away rapidly and to mature their growth thoroughly, as this section is not like the ordinary Tea Rose or H.P., flowering, as they do, from the current season's growth entirely. Instead, then, of leaving the pruning of climbing vigorous growing sorts until the spring, as in the case of Tea varieties, it is much better to prune at the end of August or early in September. The branches and shoots retained then have a much better opportunity of giving a fuller crop of blossom the following year, as the growth is more readily ripened by additional space, air, and sunshine which the shoots obtain.

The point is to cut away all weakly growth and branches three years old, laying in the vigorous growths of the current season, as from these the finest trusses of bloom are obtained, especially in the case of *Crimson Rambler*, *Paul's Carmine Pillar*, and *Myriantes Réconcle*, commonly known as the Seven Sisters Rose. After pruning, if there is any suspicion of the roots being at all dry, give the soil such a soaking that every root will be made moist. This will enable the plants to make their final growth, and plump up their buds in such a manner as to give the best results next season.

Liquid manure for Roses is not employed nearly as much as its merits deserve; no stimulant that I know is so easily applied or so efficacious, and is easily obtained. What other manure or aid artificially employed will assist the developing of such growth, leaves, and, lastly, blossom, as liquid manure? I would ask. The drainings from the cow-sheds, stables, and piggeries are, of course, the easier obtained; but it is not every amateur cultivator who is possessed of such means. The remedy, then, is to obtain animal manure of some kind, such as cow, sheep, or horse droppings, place them in a bag along with a quarter portion of soot in a tank of clear water. The water passing through the bag will extract the manurial properties from the manure. This applied to the roots of the Roses liberally will give a fillip to the growth.

Roses upon their own roots is an interesting method of cultivating this favourite flower. It is purely a question of vigour in varieties; some sorts appear to require the aid of an added stock to give the best results, while some others will flourish amazingly when growing upon their own roots. Now is a good time to insert cuttings of half-ripened wood taken off with a "heel" and inserted firmly in sandy soil in a cold frame, the frame kept close and shaded for a week or two until callusing has made good progress. Sprinkle the cuttings occasionally to keep them fresh and to prevent the leaves falling off prematurely, as the longer the leaves are retained the more certainty there is of obtaining a good strike.

The bulk of the vigorous-growing varieties will succeed from cuttings; for instance, sorts like *Baroness Rothschild*, *Magna Charta*, *La France*, *John Hopper*, *Edouard Morren*, and *Mrs. John Laing*. In the climbing section there are many varieties that succeed propagated in this way, notably *Crimson Rambler*, *Ranunculoides*, *Félicité Perpetué*, and *Aimee Vibert*. *Rose Rêve d'Or* is a magnificent variety when properly managed, although many persons complain about its shyness in flowering. I lately saw a magnificent example of this Rose. It was planted alongside of a high wire fence facing eastward; the main branches were trained thinly, and from these a vigorous annual crop of shoots are obtained which terminate with a full crop of blossom at the point of each shoot.

Growing Roses in masses of one variety is an effective method where space admits of it, especially when the surroundings are of grass. As a "setting" for almost any colour, grass has no equal in colour contrast. For the benefit of intending Rose planters in the coming autumn I append the names of a few varieties that cannot fail to give satisfaction. The *Persian Yellow Brier*, with its dense mass of deep yellow blooms borne on plants of a semi-weeping character, with dark stems and deep green leaves, is as fine an object in the garden early in June as it is possible to see. *Madame Georges Bruant*, belonging to the *Ramosa* or *Rugosa* section, is another charming variety for massing; its pure white semi-double blossoms contrast so well with its deep green foliage, and it has the merit of flowering perpetually.

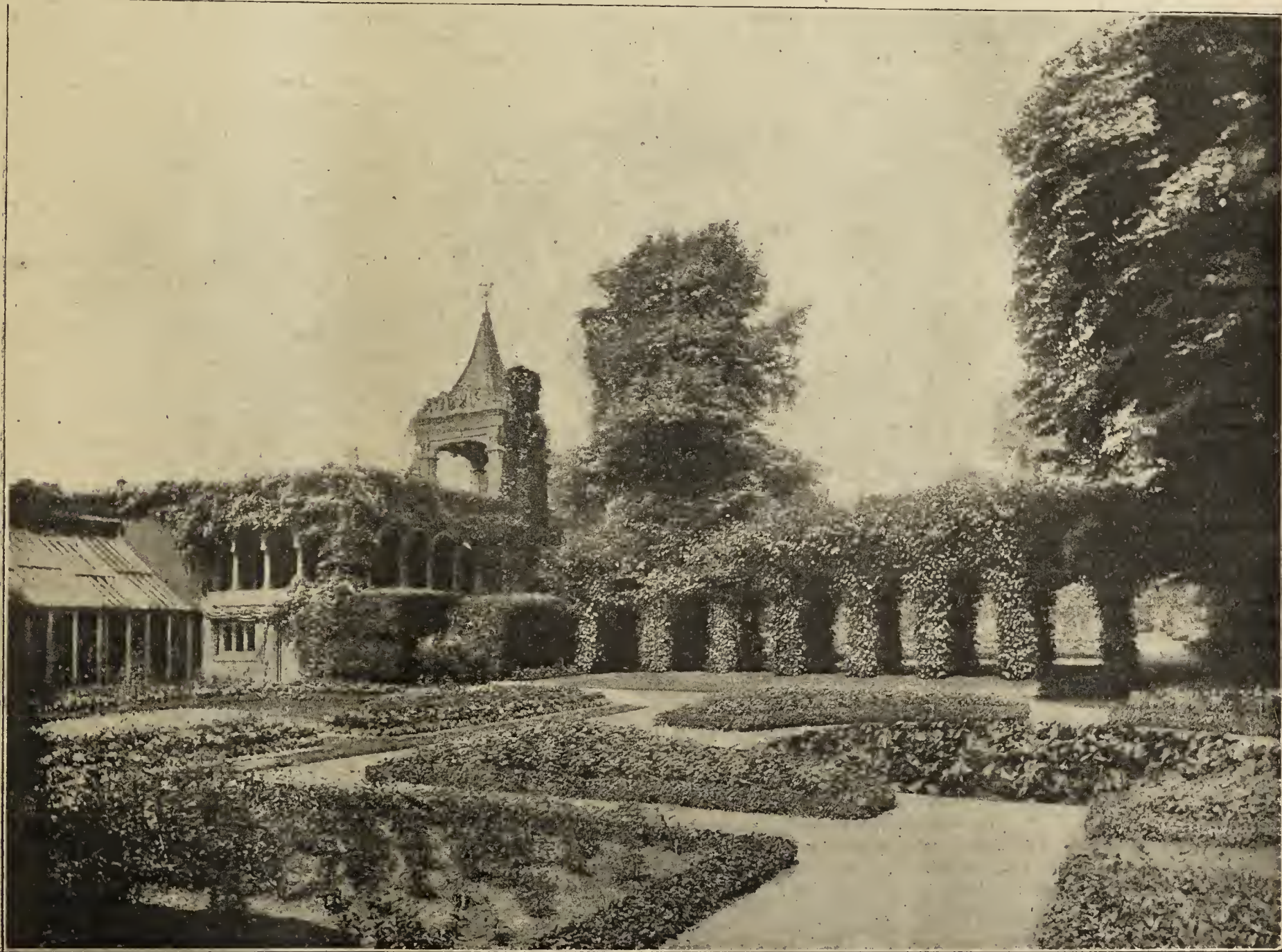
Marie Pave belongs to the section known as miniature or Fairy Roses, but it really grows much too strong for that section. A stout bush planted here less than two years since is now a yard through, and nearly as high. At any rate, it is a Rose that should be grown much more than it is. The pure white blossoms are not only shapely in themselves, but are produced in the utmost profusion. It has the merit, too, of being a continuous flowering variety; a mass of it would be a fine object in any garden. Of all Roses for massing none is more effective than *Annosa* in the Chinese section, the rosy pink tinted

blossoms are continuously present on vigorous plants. A full crop of blossom, too, may be had right through the autumn months by cutting rather hard back a batch of the plants flowering in June. A new crop of shoots are then made, following with a batch of pleasing flowers in November, and still later if the weather is not too severe.

Besides Carmine Pillar, which I regard as the most effective of all single flowered Roses, Bardou Job deserves every encouragement to be grown in a mass. Although it is not, perhaps, strictly speaking a single variety, it is nearly so, and cannot be classed in any other section. Be that as it may, it ought to be more cultivated than it is, in spite of the horror some persons profess against all Roses approaching the single form. Bardou Job planted in a mass, pruned hard back in spring, and encouraged to grow vigorously, will hardly ever be without blossoms until well into the autumn. The colour is an intense crimson with a lustrous dark velvety suffusion. Fellenburgh, the dark crimson China,

Anna Maria de Montravel and Gloire de Polyantha cannot be omitted. The former has such shapely blossoms as well as quantity that it at once attracts attention. The latter is white in its base, deeply flushed and tinted with rose. Many more varieties might be added, but sufficient space has already been taken up to serve the purpose of illustrating my views on the question of the massing of Roses in separate colonies.

One more cogitation and I must cease, for this issue at any rate. The varieties representing Wichuriana are gradually coming to the front. There is something so novel in the manner of growth, creeping as they do close to the ground and blossoming so freely at the same time. In a cut state the blooms do not last long; they are, however, specially fragrant in their perfume. To allow them to run along the ground is not the best way to utilise this type, as with the first heavy shower the flowers are splashed and spoilt. In the case, also, of their



LILY-POND GARDEN, HOLLAND HOUSE.

is a superb variety for this form of treatment; no Rose that I know gives a greater profusion of blossom. Where a huge mass of a second pure white are required in June, Madame Plantier is worthy of attention.

Gruss an Teplitz is quite one of the best of bright coloured "garden" Roses we have, continuing to flower long into the autumn. The bright scarlet crimson of its flowers harmonise so well with the deep tinted leaves. Gustave Regis in a mass gives a wealth of long pointed buds with a coppery yellow tint. As the blooms expand the inner side of the petals is a pale yellow. Perhaps this Rose has the largest individual petals of any variety, certainly they are immensely proportioned. Papa Gontier I have before alluded to in the *Journal of Horticulture* as being one of the finest varieties we have for garden decoration. To see a bed containing from fifty to one hundred plants, and all in the picture of health, is a sight to be remembered. The bright rosy crimson buds are especially effective in a cut state. The foliage, too, is stout, and especially dark green in colour. Where smaller growing varieties are required for edgings or other special positions,

being mulched with manure to protect the roots from drought, the birds are sure to disturb the mulching, covering the flowers and often the plants too. Cultivated as tall standards on the ordinary Brier or Manetti, allowing the branches to droop at will, is the most effective method of displaying this charming type of Rose. For covering a sloping bank in a sunny position they are suitable planted in stiff retentive soil, afterwards covering the soil with stones to protect the leaves and blossoms from rain splashes. The stones, too, will maintain the soil in a moist state, thus enabling the plants to grow away uninterruptedly should a spell of dry weather set in.

In addition to the ordinary type there are now several other varieties:—Lucida, glaucous reddish foliage with bright red flowers; Pink Roamer, pink with a silvery white centre and orange-red stamens; South Orange Perfection, double rosy blush flowers which change to white; Universal Favourite, double pink; and Manda's Triomphe, a strong erect-growing variety with pure white double blossoms, a good companion to Universal Favourite.—E. MOLYNEUX.

NOTES

NOTICES

Appointment.—Mr. Gerald Carroll, late head gardener at Dornden, Dublin, has been appointed in the same capacity by Andrew Jameson, Esq., of Sntton, same county, and takes up his new charge on November 1st.

Horticultural Register.—Messrs. Protheroe & Morris's "Register of nurseries, market gardens, farms, florists' seed businesses, and partnerships to be let or sold," dated August, 1901, has been issued. Their address is 67 and 68, Cheapside, London, E.C.

Boston Dahlia Show.—We notice that the dates for this popular event are fixed for Thursday, September 12th. Medals and certificates are offered, besides some £30 in prizes. Application should be made to Mr. Frank Waite, Boston, Lincs., who is the hon. sec.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 27th, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 p.m. A lecture on "Garden Manures" will be given by Mr. F. J. Baker, A.R.C.S., at three o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, August 13th, eighteen new Fellows were elected, making 706 since the beginning of the present year.

The Cumbrian and Cheshire Mushroom Crop.—The Mushroom crop in Cumberland is heavier than it has been for years, and the old-lying grass lands and green meadows are being scoured by large bands of people out of work and others, who find fairly lucrative employment in the gathering of the edible fungus. The Mushrooms are bought in the towns by dealers, and despatched to the larger provincial markets. So plentiful is the fungus that cartload over cartload has been brought into the towns, and at Wigton the price has fallen from 2s. at the beginning of the week to 1s. In some districts of Cheshire the crop is also an unusually large one, many of the samples being of an extraordinary size.

Variorum.—The death of Mr. William Galbraith of Worcester, Mass., and of Mr. John Kinneer, Philadelphia. Both were men of note in the States, wherein they laboured, and both were natives of Scotland. Judging from the frequent obituary notices of men of British origin who have spent their lives as horticulturists in America, we conclude that Americans are greatly indebted to the "Old Country" for a large section of its progress in gardening. * * The Tree Planting Association of New York reports that since January 1st it has planted 931 trees in the streets of the borough of Manhattan, and 1949 in other boroughs of the greater city, making a total of 2880 trees. * * It is now gravely proposed by the Park Commissioners of New York to make the confined wild animals more home-like by surrounding them with paintings of the jungle growths of their native haunts! How is that for humanity run mad? * * The loss to New York State annually from insects is estimated at 26,000,000 dols., while to the entire nation the losses reach 300,000,000 dols. The saddest fact, however, is that almost all this could be saved if proper methods of control were universally exercised.

The Will of the Late Miss Ormerod LL.D.—The will of the late Miss Ormerod has recently been proved. It is dated July 17th, 1900. The total estate has been valued at £52,041 19s. gross, and £51,582 13s. nett. Miss Ormerod bequeaths to the governing body of the University of Edinburgh £5000 for the University; to her secretary and housekeeper, Anne Hartwell, £5000; to three servants, £200 each; to Dr. Eustace Henry Lipscomb and Mr. Edmund Kell Blyth, executors of her will, £500 each; to Mr. Thomas Pritchard Newman, of 54, Hatton Garden, lithographer, the other executor, £100, and to him also, in recognition of his valuable service, £2000, and the copyright of all her works, and the copies of her works in the possession of his firm of West, Newman, & Co., and of the publishers, Simpkin, Marshall, & Co., and all of her collections. But in the event of the death of Mr. Newman in her lifetime, the testatrix bequeathed her copyright and collections and £2000 to the Edinburgh University for the encouragement of the study of the ravages of injurious insects. She bequeathed to Professor Wallace £1000 and her book of documents, reciting the circumstances of her obtaining the honorary degree of LL.D. Various legacies are left to private friends and relatives.

Royal Appointments.—We learn that royal warrants have been granted to Messrs. Webb & Sons of Wordsley, Stourbridge, appointing them seedsmen to his Majesty the King; to Messrs. Little & Ballantyne, Carlisle; and to Messrs. James Veitch & Sons, Royal Exotic Nursery, King's Road, Chelsea.

Presentation to Mr. MacKellar.—Mr. MacKellar, the head gardener at Sandringham, on leaving to take up the duties of head gardener to the King at Frogmore, was presented by the garden staff and other friends at Sandringham with a solid silver tea service, which was formally handed over to him by Sir Dighton Probyn.

Trade Notes: Hartley & Sugden's Boilers.—The new catalogue of the above Halifax firm has just been issued, and is the result of long experience and careful study of the business of making heating apparatus boilers. Special attention is drawn to the boilers on pages 8, 10, 16, and 22. These are the newest designs, and are specially adapted to heating the larger class of buildings. They are exceedingly economical in fuel, a large surface being presented to the flames in the firebox, and they are so constructed as to occupy little room. In the other pages are found various designs of boilers adapted to special purposes. Their continued use over a long period proves their adaptability to the purposes intended. They are not only for the heating of buildings of all sizes, but also for the heating of greenhouses and other horticultural buildings, and for providing steam for cooking, agricultural and motor purposes. These boilers are constructed of wrought iron, and therefore are not as liable to fracture and failure as cast iron ones.

Presentation to T. H. Cook.—Recently, at Aberlady, a large meeting was held to do honour to Mr. T. H. Cook, Gosford, previous to his leaving for Sandringham. Mr. Connor, Craigielaw, presided, and, after giving a brief sketch of his successful career as a gardener, handed over to Mr. Cook in name of many subscribers a handsome mounted oak tea tray, bearing the following inscription:—"Presented to Mr. Thomas Cook by his fellow servants on his leaving Gosford for Sandringham, August, 1901." This gift was accompanied by a hot-water jug, cake basket, and ten volumes of "Chambers' Encyclopædia" from the same donors. Mr. Selater, Edinburgh, after making a few felicitous remarks, handed over a beautifully chased solid silver salver and purse of sovereigns in name of Aberlady and other subscribers, bearing the following inscription:—"Presented to Mr. T. H. Cook by his Aberlady and other friends, on the occasion of his appointment to be chief gardener at Sandringham to his Majesty the King, August, 1901." On Monday, Lord Wemyss personally presented Mr. Cook with a very handsome inlaid timepiece, with the inscription, "Presented by the Earl of Wemyss to Mr. Thomas Cook on his leaving Gosford for Sandringham, August, 1901."

Legal Notes: The Erection of Wire Fencing.—"The North British Agriculturist" gives a record of the following case:—"General Lockhart of Cambusnethan House, Wishaw, is the owner of the farm of Upper Carnbarns, which is let on lease to Mr. Nichol Hamilton. In the lease the tenant is given special permission to grow fruit, and at the present time he has something like 50 acres under Strawberries and Raspberries. The farm is surrounded and intersected by plantations, and soon after beginning to grow Strawberries the tenant found that the rabbits from the plantations destroyed a considerable part of his crop. Before entering on the farm, one or more fields had been partially fenced with wire netting, and this netting the tenant bought from his predecessor. Soon after entry he erected other portions, and at the present time has most of his fields so protected. The landlord, in raising the present action, asks that the tenant be prevented from erecting more wire netting, and that he remove all that has already been erected, on the ground that the erection of the wire netting confines the game to the plantations, and prevents them from getting the run of the farm. There is a clause in the lease which binds the tenant to preserve the game. The action was begun in the spring of 1900, but from several causes a decision has only now been given. It is as follows:—The Sheriff finds that the defender is tenant of Upper Carnbarns Farm, belonging to pursuer; that in terms of his lease he is bound to protect and preserve the game on these lands; that he has since he became tenant erected wire netting round the fields numbered 107, 108, 109, 310, 427, and 446 on the ordnance survey map produced in process; that in so doing he was acting in breach of his lease above-mentioned; therefore, ordains the defender to remove the wire netting erected by him round these fields, in terms of the first conclusion of the prayer of the petition, within fourteen days from this date, reserving to pronounce further; and decerns, and grants leave to appeal."



A CLUSTER OF CLEMATIS. (See page 178).



The Fruiting of Oaks.—In the manner of fruiting, Oaks are divided into two sections, those that bear acorns on the young shoots of the same season, and those that bear them on the shoots of the previous year's growth. In the latter case the acorns are formed a year in advance of their starting to perfect themselves, being in an embryo state for twelve months. In the former class are the white and the Chestnut Oak and others, while the latter is represented by the well-known red and the scarlet Oak. These two, says Joseph Meehan, the red and the scarlet, are very full this season of developing acorns, but have no embryo ones for next year.

Loganberry Jam.—The Loganberry is the berry *par excellence* for jellies and jam on account of its tart qualities. Its flavour in jam is fine and its colour very bright. This is my recipe:—Gather the berries before they turn dark, when they are red; crush them; to each cup of crushed berries add one cup of the best sugar, stir for some time until the sugar is all melted, set out in a strong sun, if this is possible, for three hours. Set over a brisk fire and stir slowly and let boil for three or four minutes only, pour in jam jars or jelly glasses, if for immediate use, and seal. If handled in this way the juice will be bright and the flavour fine; long cooking turns the jam dark and kills the fresh flavour.

Water Lilies a Neglected Feature of Gardening.—The presence of small streams or brooks in the grounds of suburban residences is not uncommon, yet attempts to make good use of them by cultivating a few aquatic plants, particularly those deliciously fragrant Water Lilies so insistently sought in their native haunts, are extremely few. These hardy flowers, says "Meehan's Monthly," are easily grown and of less care than most garden flowers; while the pleasing results are in greater proportion. *Nymphaea odorata* is the fragrant white flowered one above referred to. *N. lutea* is a desirable yellow species of similar type. Both are easily obtained and grown.

Wistarias in Pots.—The Wistaria may be readily secured by layering during the early summer months, using the runners which the old plants usually send out freely from the base. After having rooted they may be tied up and stopped at the height desired. That winter they must be housed or at least protected from hard freezing. They should be planted out the next spring, and restricted to from four to six breaks at the top, and should be kept pinched back to from four to six leaves as fast as they grow. They should be potted after the second year, as they make long roots in the open ground. The second year after being potted the plants should flower. In answer to the several questions, the plants are dwarfed by pinching the young growth; they need no greenhouse, as they are hardy; they need only an ordinary potting soil, but rather more moisture and feeding than most plants after being established in pots. Wistarias may be kept in pots in a cellar over winter, with a temperature of from 30° to 45°, with plenty of ventilation in suitable weather. They flower in the latter part of May.

The McDonald Berry.—This most valuable new berry is of Texas origin. It is a tree Dewberry, that is, it grows into a powerful upright bush, very rigid and stout, and throws out hundreds of lateral branches which hang and droop in a most graceful manner. Wherever these branches touch the ground, they take root and form new plants. This berry cannot be equalled for productiveness, as a single plant will yield on an average of 20 quarts of perfect fruit to a plant. Another most wonderful feature is its extreme earliness, as it ripens its fruit a week earlier than the earliest Dewberries. Its bright green foliage is retained throughout the hottest weather, and in California it is a perpetual evergreen. The berries are of enormous size, deliciously sweet, and highly flavoured, in fact their flavour is wonderful, so melting, rich, and sweet, like our best wild Blackberries. It is a remarkably vigorous grower, and stands heat and cold alike. In colour it is a sparkling black. It is a most excellent shipper, and will carry in perfect condition hundreds of miles. This berry will, I think, after its merits become better known, be very extensively planted, as early fruits are the greatest money makers.—S. L. WATKINS (in "American Gardening.")

Elder Berries.—The Elder has been grown in Great Britain from very ancient times. From the days of Hippocrates it has been famous for its medicinal properties. German writers have described it "a magazine of physic." In Germany it is regarded with much respect. The bruised leaves worn in the hat or rubbed on the face will keep the flies away. The juice of 5 lbs. of crushed berries simmered with 1 lb. of white sugar is excellent for colds. One or two tablespoonfuls should be taken at bedtime in a tumbler of hot water. Old John Evelyn declares that "if its remedies were fully known, I cannot tell what our countrymen would ail." Elderberry cordial should be procurable at most herbal stores.

Double-flowered Horse Chestnut.—The large growth of Horse Chestnut trees, their handsome foliage and grand flower spikes, place them in the forefront of desirable trees for planting. In early spring, when the fresh foliage is well developed, there is no more handsome tree. The common European Horse Chestnut, *Hippocastanum*, exists in some double-flowered forms, and these are very handsome and desirable. As is generally known, double flowers are more lasting than single ones, probably because of no fertilisation taking place, owing to lack of stamens. Besides the gain in the lasting of the flowers, the panicles themselves are very pretty. Nurserymen list a double white and a double red variety. To increase these double-flowered sorts budding is usually resorted to, and in this vicinity the month of July finds the bark of the stock in good condition for the work. Another one usually increased in the same way is *H. rubicunda*, the red flowered Horse Chestnut. This lovely sort can be raised from seeds, but to get seeds from a tree of it is quite uncommon.

Rambler Rose Queen Alexandra.—One of the gold medals awarded this year by the National Rose Society at its metropolitan exhibition on July 4th was bestowed upon the new Rambler Rose, of which we furnish a much reduced illustration on page 183. This is a variety that has certainly "come to stay," to employ an oft-repeated expression. It was raised by Messrs. James Veitch & Sons, Ltd., from a cross between Turner's Crimson Rambler and *Rosa multiflora simplex*. Both parents have had impression, though the Crimson Rambler habit is strongly shown by the vigour of the wood growth and the healthy luxuriance of the foliage. The flowers are rose pink, and for other characters the reader need only study our figure. It will there be seen how profuse the massive pyramidal clusters are. Many folks do not wholly appreciate the colour of the flowers of Crimson Rambler, and have frequently expressed an opinion that a pink Rambler would be better. Now we have it. There is thus a crimson Rambler, a pink Rambler (Queen Alexandra), a white Rambler (Thalia), and a yellow Rambler (Aglais). Some may say that Euphrosyne has prior claim to be called the "Pink Rambler," and indeed it has, but it is not a "Rambler" like the variety Queen Alexandra.

Ivy-covered Trees.—In a personal letter from a friend inquiry is made as to the wisdom of permitting English Ivy to climb up a living tree. I have told him, says Joseph Meehan, there is nothing whatever against it while the Ivy confines itself to the trunk and main branches; but the vine must not be permitted to overlap the foliage of its supporter. The covering of the trunk is of no injury at all, but it does not need saying to the thoughtful that to smother up foliage is to kill it. The use of Ivy for the above named purpose is quite common in Europe; and the grand old trees, with their trunks heavily clothed with living green, adds charm to their surroundings. Having in mind the vicinity of Philadelphia, the Ivy is quite hardy. In winters of severe freezing and strong sunlight the foliage will "scorch" when the vine is on the south side, but the wood rarely suffers. On all other situations there is no harm at all experienced. Many of the varieties of this Ivy have very pretty foliage, some of the leaves being so finely divided as to merit almost the name of Fern-leaf. While on the subject of vines on trees, what a beautiful object an old decaying tree becomes when a Virginia Creeper, a Flowering Grape, or some similar vine, is permitted to clamber over it! In some of our public parks, as well as in our woods, such sights are to be seen, and they add a great charm to the surroundings. The Virginia Creeper is particularly desirable on account of the long, pendent shoots it makes, hanging down many feet from the main body. Pretty sight as these strings of foliage are in summer, their autumn brilliancy of colour far surpasses it. The Flowering Grape alone should be employed where a Grape is desired. Then the sheet of green which the foliage forms, the delicious odour and the shade are all ours, without the fruit, which is not desirable where ornament and beauty are alone our aim.

Hardy Flower Notes.

As the seasons go and come, so pass away and return our flowers. The beauties of the early summer and of the midsummer days have lost their freshness, and we are amid the golden wealth of the early autumn. Dahlias and Hollyhocks, Gladioli, and other half-hardy flowers join with annuals in proclaiming their value, and in telling how much our gardens owe to their colouring and their grace. As for the truly hardy flowers, there is one of those pauses in their display which are visible every now and again to those who live their lives among them, and see the perpetual changes which they give. Not that there is a chasm; it is only a depression for a time, and it has been deepened by so much dry weather. Now,

however, we see the breaking out of the fresh display, for buds are bursting and swelling, and showing their colours, to tell of the later yellow composites, and of the soft display of the Michaelmas Daisies now on the way. We look daily, too, for the appearance of the first Colchicums and autumn Crocuses; for the Mossy Saxifragas, which are usually so green and fresh at the blooming of these flowers, grow fresher every day now that the rain is here. There are yet pleasures many for him who loves his garden and his flowers, ere King Frost descends upon us with his chill and conquering array.

Now is the time of tall Sunflowers and other yellow composites, which are in the heyday of their beauty and gaiety. Pleasing among these are the double flowers of *Radbeckia lacinata* Golden Glow, whose pretty and useful double flowers cause some surprise in the minds of those not previously acquainted with its blooms. Some would take it for a Dahlia were it cut and in a glass,

but many ask what flower it is. I like its type plant, too, with its drooping petals and its greenish yellow disc, which is less cone-shaped than that of the allied *R. californica*, but is yet well raised, so as to help to give distinctness to the bloom. I have never seen it 12 feet high, as it is said sometimes to be at home in the United States and Canada, but 8 or 10 feet, as one has seen it occasionally, is an ample height for a garden flower, and one would rather have it less for most places. Someone who would introduce the form called by Asa Gray *R. l. humilis*, which grows from 1 to 2 feet high, would be a benefactor to many a suburban gardener whose space is too limited for the taller flowers.

The fly in the pot of ointment has many counterparts in gardening, and many are the forms in which they present themselves. Thus the aggressive-rooting habit of many flowers is an obstacle to their use in

some positions, however valuable they may be elsewhere, and however useful their flowers might be in themselves. It is one of the drawbacks of such Sunflowers as the beautiful one named Miss Mellish that it runs about at the roots, and would soon spread over the whole border if left alone. This, too, is the fault of *H. Daniel Dewar*, which is this year better than it has been before. It is surprising how quickly it has increased, and how it threatens to take possession of the bed in which it grows. Yet it deserves a good position were it only of use for cutting alone. It is to the *Helianthus* what the Cactus Dahlia is to its race, and its pointed petals are, in most cases, of the true Cactus form. When we have a double-flowered *Helianthus rigidus* Daniel Dewar we shall have a prize indeed.

It is a contrast to turn from the contemplation of these taller flowers

to one near by, which differs not only in stature but in colour as well. This is *Gentiana septemfida cordifolia*, one of the choicest flowers of undoubted hardiness which can grace the border or ornament the rock garden. Hardy, free-flowering, of a beautiful blue, and of charming habit and form, it stands in the front rank of one of the prettiest genera of garden flowers. It does not increase rapidly, but it is readily raised from seeds, which it produces in quantity, and which germinate well if sown under glass, or in a reserve bed for such things. It grows very satisfactorily in sandy peat, but is not particular in this respect, and can be grown in almost any good garden soil. It usually flowers with me in July and August, and now that moister weather conditions prevail is likely to keep in bloom throughout the latter month. It grows little more than 6 inches high, except when tied to a stick (which it should never be), and if left alone will form a pretty clump of decumbent branches, each



RAMBLER ROSE VAR. QUEEN ALEXANDRA.

Flowers rose-pink; the above is greatly reduced.

with its terminal cluster of exquisite blue flowers. Having thus left the taller flowers for the time, it is natural to look about us at the others of dwarfer habit. Curiously attractive among these is the plant called *Origanum Tourneforti*, which is growing on a sheltered sunny rockery in a dry soil. Here its small Hop-like heads, on spikes some 12 inches or so in height if quite erect, which they seldom are, are pleasing, if not brilliant, from their colouring, and for the little pink flowers which protrude from the leafy bracts. These spikes of flower are denser than those of *Origanum Dictamnus*, and this Dittany of Amorgos, as the plant is also called, seems hardier than the better known Dittany of Crete. Then if we look round we shall see a crowd of flowers on *Olearia Haasti*, a sprinkling still on a good bush of *Cistus corbariensis*, some spikes of gold on *Cytisus nigricans*

longispicatus, the charming flowers of several forms of *Lathyrus latifolius*, Bellflowers great and Bellflowers small, gay Montbretias, hardy as well as half-hardy Chrysanthemums. The Nymphæas in the pools have had a glorious season, revelling as they do in full sunlight. Hydrangeas and hardy Fuchsias have had a happy time as well, though the former would have enjoyed more moisture than fell to their lot. Roses are in the background, waiting for the later bloom, but *Oenotheras* and many other flowers are gay and cheerful, as we expect them to be in the harvest time.—S. ARNOTT.

Societies.

Royal Horticultural—Scientific Committee, August 13th.

Present: Dr. M. C. Cooke (in the chair); Rev. W. Wilks, Prof. Hartog, Messrs. Gordon, Odell, Chapman, Hudson, Worsley, Bowles, Drury, Saunders, and Dr. Masters.

Iris leaves diseased.—Mr. Wilks brought leaves of a German *Iris* thickly bestrewn with brown spots, which become confluent, and eventually bring about the death of the plant. Dr. Cooke identifies the fungus as *Heterosporium gracile*, and recommends spraying with sulphide of potassium or ammoniacal solution of copper. All diseased leaves should be forthwith burnt.

Banana disease in Egypt.—Mr. Lionel Saunders made some inquiries about this, but, in the absence of specimens, the committee could not pronounce an opinion.

Ceropegia debilis.—Mr. Odell exhibited specimens of this curious stove climber from the Zambesi.

Lycoris squamigera, and other flowers.—Mr. Worsley showed flowers of this species which turn of a slaty-blue when exposed to the light. He also showed flowers of a *Hippeastrum* with rosy, acute, perianth segments, traversed by veins of a deeper colour. The leaves are produced some months after the flower is expanded. The filaments are more exsert than in *H. stylosum*, to which it is nearly allied. From the same gentleman came flowers of the single and double varieties of *Zinnia Haageana*, and of *Tagetes patula nana*. Seeds from this latter form, known as Cloth of Gold, produced pure yellow flowers, and some had, except in their dwarf habit, reverted to the large African Marigold. Both single and double forms were observed. Mr. Worsley also alluded to the variation in the *Dahlia*. Seeds of a white-lipped variety produced 70 per cent. of self-coloured flowers, and 30 per cent. of flowers varying in colour from red and yellow to white.

Diseased Crocus corms.—Mr. Bowles showed diseased corms, which were referred to Dr. Cooke for examination.

Proliferous Aconite.—Mr. Bowles also showed flowers of an *Aconite*, in which the stamens and carpels were absent, and in their place were secondary flower buds, each with fine green sepals, no petals, numerous stamens, and generally no carpels.

Plantago major.—Mr. Bowles exhibited fine specimens of the so-called Rose Plantain, in which the bracts are replaced by tufts of leaves.

Mandragora officinalis.—The egg-shaped fruits of this species were also shown by Mr. Bowles.

Weston-super-Mare, August 13th.

This society was unfortunate in the choice of date for its twenty-fourth annual exhibition, rain continuing at intervals from morning until evening, and seriously interfered with the desired patronage. This was to be much regretted, not only because of the excellence and extent of the show, but because there has been of late years a series of reverses. In the plant classes the redoubtable Mr. Cypher of Cheltenham was, as usual, well to the front, winning first prizes respectively for twelve varieties, comprising ornamental and flowering; six specimen flowering plants, distinct; four Orchids, distinct; single specimen greenhouse, stove, and ornamental foliage, and new and rare plant. Mr. W. Finch, Coventry, second prize in some of these classes. With a group of plants on a space of 100 square feet Messrs. Finch took first prize with an excellent arrangement and good material. There was only one other competitor, Messrs. W. Brooks, Weston-super-Mare.

For a group of 50 square feet there was but one exhibitor, Mr. R. Russell; these classes felt the absence of Messrs. Vause, Leamington, and Brock, Exeter, notable competitors of other years. Messrs. Brooks, and J. Hollier, Clevedon, won with eight exotic Ferns, and Mr. J. P. Capell with six varieties. The classes for trained specimen Zonal Pelargoniums, Fuchsias, Petunias, and Coleus, Caladiums, Begonias (single and double), Gloxinias, and Liliums are each keenly contested by local growers. Colonel Foster Barham, Messrs. Brooks, C. B. Shepherd, J. P. Capell, W. J. Paine, A. Cole, Clifton; E. W. Hill, and J. Hollier being those most successful in the several classes provided.

Cut flowers, always a fine feature at Weston-super-Mare, were none the less so on this occasion, some of the classes affording the keenest rivalry. For the time of year Roses were good, and represented local

as well as distant growers. For twenty-four triplets, Messrs. J. Townsend & Sons, Worcester, was easily first, Messrs. A. Walters, Bath, second. The next class for twelve singles found Messrs. Perkins, Coventry, the winners, Messrs. Townsend winning with twelve Teas. Messrs. Treseder, Cardiff, and G. Humphries, Chippenham, scored with thirty-six Cactus Dahlias, and with twenty-four and twelve Gladiolus the prizes fell to Messrs. G. Humphries and W. W. Baker. Asters were extra fine in quality and numerous staged; B. C. Shepherd, Esq., and Col. Barham, excelled in quilled varieties, the latter gentleman showing the best French varieties; Mr. A. H. Newman, Bath, and Mr. T. Dobree, Wellington, following.

Hardy perennials were well staged by Messrs. Walters and Brooks for the prizes offered, and annuals by Mr. A. H. Newman and J. A. Waller, Esq., Westbury-on-Trym. Sweet Peas were represented by no less than seventeen competitors, and which made a good display of these popular flowers, Messrs. Adey, Penarth, and J. A. Waller taking the first prizes for twelve and six varieties respectively. As usual, the floral table decorations, bouquets, vases, baskets of flowers, and kindred exhibits were numerous contested, amateur and professional associating in the aim for supremacy. In the latter capacity such well-known names as that of Messrs. Cypher, Perkins & Sons, W. Brooks, W. H. Coles, Bristol; and E. S. Cole & Sons, Bath, appear in the numerous classes provided in this section.

Fruit on the whole was very good, for while some classes were somewhat weak, others were correspondingly good. Col. Vivian, Rod Ashton (Mr. W. Strugnell, gardener), was to the fore with a collection of eight dishes, staging Muscat of Alexandria and Black Hamburgh Grapes, Sea Eagle Peaches, Pineapple Neotaries, Western Hero Melon, Late Duke Cherries, Apricots, and Plums; second, Mr. E. Hall, Bath. For four dishes Col. Bramble was first; Mr. Kitley, gardener to W. A. Sandford, Esq., Wellington, second. Mr. Lock, gardener to B. H. Hill, Esq., Crediton, was the only exhibitor of Pine Apples. The Rev. J. A. Burr and L. R. Price, Esq., showed the best white Muscats; W. Howell Davis, Esq., Bristol, and W. A. Todd, Esq., Clifton, any other white with Buckland Sweetwater. Black Hamburgs were well staged by Mrs. Talmage, Clifton, and Col. Vivian. Mr. Fewtrell, gardener to C. C. Tudway, Esq., Wells, produced the best black Muscats with fine Madresfield, the Frome Fruit and Flower Co. coming second. The latter won with green-flashed Melon, Mr. Lock second, and the latter won with Nectarines and Apricots. The Frome Fruit and Flower Co. staged fine Sea Eagles Peaches for the first prize. Dessert and culinary Apples were wonderful for colour and size of fruit, and it is worthy of remark that the cottagers' exhibits of dessert Apples were models of high culture, the Somerset soil developing fine colour combined with good size.

Despite the droughty season, vegetables were abundant and good, competitors coming from neighbouring districts in good force, these being augmented by those from distant towns, notably from Bath, Bridgwater, Crediton, Clevedon, Bristol, and Wellington. Mr. G. Lock was a successful competitor in the single dishes, Messrs. G. Garaway and Co. scoring well in the collections. Classes, and winners of the prizes, are so numerous that space do not permit of the repetition necessary in dealing with them. It is to be regretted that so excellent a society should be so unfortunate in choosing wet days, with the consequent diminished gate and banker's account, but it is hoped the subscribers will stand by the energetic committee in their time of need.

Trowbridge, August 14th.

The fifty-second exhibition of the Trowbridge Horticultural Society was held on the above date, one, unfortunately, marred by heavy rain. The attendance thus was reduced by several thousands compared with other years. The show itself was in most respects equal to those which have preceded it, some classes being more keenly contested than usual, others less so. With the Trowbridge Shows are associated a fame for trained specimen Fuchsias; indeed, it may be looked upon as the parent of the exhibition Fuchsia, since for so many years it has fostered their culture, and from the district so many of the sorts grown have been raised by past and present veterans.

Mr. George Tucker may fairly claim the title of the Fuchsia champion, since for so long a time he has suffered no defeat, his plants this year being equal to his best, including some of his own seedlings, notably Tucker's Rival. His collection of six varieties were models of high culture, some 8 feet in height, of proportionate breadth, almost concealing the pots from view. Mr. H. Chislett, gardener to E. T. Foxcroft, Esq., was a worthy second, and Mr. Pocock third. Four varieties found the same exhibitors in exactly the same positions, smaller classes of former days being discontinued. The next important plant classes are the trained flowering specimens; in which Sir Roger Brown's gardener, Mr. Matthews, excelled in nine varieties, *Ixora coccinea*, *Bougainvillea glabra*, and *Erica Austiniana* being in fine form. Mr. G. Tucker, with only slightly less perfectly flowered specimens, was second; Mr. A. Tucker, gardener to F. Applegate, Esq., third. Mr. G. Tucker won with six varieties, three ditto, and a single specimen, Mr. Matthews taking second prizes in each instance.

Two classes are provided for groups arranged for effect, one having a diameter of 9 feet, circular in form, the other half that size. Mr. J. Pope was given the first prize in the larger, Mr. Matthews second, and Messrs. E. S. Cole & Son, Bath, third; but by others competent to

form opinions the decision of the judges should have been exactly reversed, the first named being exceedingly formal, though the plants were fresh and of nice colour and quality. The last named exhibitor displayed more artistic skill in his arrangement. Mr. T. King, gardener to E. H. Atchley, Esq., Redwell Hall; Mr. Strugnell, gardener to Col. Vivian, Rood Ashton; and Messrs. Cole, Bath, took the prizes in the lesser group, where keener competition prevailed. Begonias were splendidly staged by Messrs. Tucker, Fishlock, and Chislett, both double and single. Ferns in twelve varieties were a good feature, Mr. Mitchell, gardener to A. P. Stancomb, Esq., coming in well for first; Mr. Tucker, the former champion, taking second place. With nine foliage plants Mr. Matthews proved invincible, Messrs. Cole & Son and Mr. Strugnell following. Mr. Chislett showed the best Caladiums; Messrs. Cray & Son, Frome, the finest Coleus; and Mr. G. Tucker finely bloomed and well-trained Zonal Pelargoniums.

In the cut flower classes there were ample variety and good quality, though Roses displayed, by the absence of familiar faces, the effects of the past summer weather. Messrs. Cooling, Bath, were the only representatives with twelve triplets, and Messrs. Townsend & Sons, Worcester, that for twenty-four distinct blooms, local growers accounting for twelve and six varieties. A new class for garden Roses brought but one, though a very good entry, Messrs. Cooling & Sons, Bath, who make this section a speciality. Dahlias, like the Roses, showed a falling off, due entirely to past weather, Messrs. Cray & Sons, Frome; Messrs. Keynes, Williams & Co., Salisbury; and G. Humphries, Chippenham, being the principal exhibitors in the several classes. Messrs. Stokes & Sons, Hilberton, staged excellent herbaceous flowers in bunches, Mr. Humphries beautiful Gladiolus. Asters Comet, German, and flat-petalled, brought out keen competition and an excellent display of good blooms, mostly from Bath growers.

The entries in the fruit classes were numerous, and, on the whole, the quality good, the greatest falling off being in the Grape classes. For a collection of ten dishes Mr. Strugnell was a good first with Black Hamburgh and Muscat Grapes, fine Sea Eagle Peaches, Pineapple Nectarines, Brown Turkey Figs, Oullins Golden Gages, Late Duke Cherries, Apricots, Melon, and Pears. Mr. Hall, gardener to Lady Lonisa Ashburton, Romsey, took second prize with fine Black Hamburgh Grapes, a huge Royal Jubilee Melon, and nice Brunswick Figs as his best dishes; third, Mr. Herbert Jones, Bath. For six dishes Mr. Hall won first, Mr. Strugnell second, and the Frome Fruit and Flower Co. third, five competing. Messrs. Hall, Jones, and Strugnell staged the best black Grapes, the last named winning with Muscats, and Mr. Clack, gardener to E. Colston, Esq., M.P., Devizes, showed the best black Muscats, Peaches, and Nectarines in single dishes.

Vegetables are always a large item of the Trowbridge shows, and despite the drought which the district has so long been suffering from, they were on this occasion not much less numerous than in other years, and the quality proved surprisingly good. There is an absence of special prizes for vegetables usually presented by leading seedsmen, which is perhaps the fault of the management. Messrs. Toogood give their medals and certificates for those obtaining highest points in the several divisions, and which meet with just recognition from recipients.

Taunton Deane, August 15th.

This is the most extensive exhibition held in the West of England. There is a schedule of prizes of 179 classes, and it is not to be wondered at that seven tents are required to take the exhibits. Two of these are very large; one takes the main of the open class plants and cut flowers, the other the same in the amateurs' division, and both tents form an excellent exhibit of themselves. The public park at the top of the town supplies an excellent site for the show; the tents are substantial and bright, the arrangements as near perfect as they well can be. From the judges' point of view there seems to be nothing to desire. The day was brilliantly fine, following a heavy downpour in the west, and the attendance very large.

Stove and greenhouse plants are a leading feature both in the open and amateurs' divisions. The prizes for specimen plants are large enough to attract Mr. James Cypher with his splendid specimens, and others; while in Mr. Thomas, gardener to Wilfred Marshall, Esq., the society has a local cultivator of great capacity. On this occasion Mr. Cypher was placed first with twelve specimens in flower, which included fine examples of *Erica æmula*, *E. Marnockiana*, and *E. Irbyana*, *Ixora macrothyrsa* (Duffi), *I. Williamsi*, &c. Mr. Thomas was second with some very fine plants, including *Ixora Prince of Orange*, *I. Elliotti*, *Epidendrum prismatocarpum*, a very fine example *Bougainvillea Sanderiana*, *B. glabra*, &c. With six plants, Mr. W. Finch, Coventry, came in first, but there was little to choose between his half dozen and that from Mr. Cypher, which gained the second prize; the latter was the most attractive half dozen. Mr. Cypher was an easy first with eight fine-foliaged plants, having four noble Palms and the same number of Crotons; Flambeau and Queen Victoria were very finely coloured. Mr. Finch came second. There were several classes for specimen plants, and in that for a stove plant Mr. Cypher and W. A. Sandford, Esq., Nynehead (Mr. S. Kidley, gardener), were placed equal first. One had *Croton angustifolium hispida*, and Mr. Sandford *Bougainvillea Sanderiana*, both finely grown and bloomed. The best recently introduced plant was *Begonia Caledonia* from Mr. Cypher, the best newly

introduced foliage plant *Croton Reidii* improved (?), from Mr. W. Finch. There were specimen Ferns, Begonias, &c. [Fuchsias were shown] in fours and as single plants.]

A class for four Orchids brought some excellent examples from Mr. W. Marshall, who had *Cattleyas Leopoldi*, *C. Eldorado splendida*, *C. Sanderiana*, and *Cypripedium Rothschildianum*. Mr. Cypher also had very good specimens of *Cattleyas Eldorado*, *Gaskelliana splendida*, *Oncidium Marshallianum*, and *Cypripedium Morganæ*. Exotic Ferns were shown in collections of eight by Mr. Geo. Tucker, Hilberton, who was first with some admirably grown plants; and Mr. H. S. Bailey, Glastonbury (Mr. E. Merrett, gardener), was a very good second. Tuberous-rooted Begonias were in the form of large and finely bloomed specimens. Mr. W. Marshall was again to the fore, followed closely by Mr. Geo. Tucker.

In the amateurs' division Mr. W. Marshall was a leading exhibitor of stove and greenhouse plants. He was first with twelve and also with six; in the twelve could be seen a specimen of the Malayan *Ataccia cristata*, now allotted to *Tacca*, which Mr. Thomas grows with great success; and there were fine examples of *Ixora*, *Bougainvillea*, *Clerodendron*, with brilliant Crotons. Mr. H. S. Bailey was first with four in flower. Other flowering plants included Orchids, in which class Mr. Marshall was placed first, Fuchsias, Begonias, double and single Zonal Pelargoniums, Petunias, Gloxinias, Achimenes, &c., all shown generally in good character. The Cockscomb, which is becoming a neglected plant, is done well at Taunton.

Taunton always makes a great display with cut flowers, but the dense throng of visitors who filled the tents immediately the show was thrown open, made note-taking practically impossible. In the open classes Messrs. J. Townsend & Son, Worcester, took all the leading prizes for Roses, but they, as might be expected, were showing signs of a waning season. Dahlias were in good form generally, and in all the Dahlia classes Messrs. J. Cray & Son, Frome, took all the leading prizes. The Cactus Dahlias are already being seen in good form. Mr. A. R. Brown, Handsworth, Birmingham, came west with his Carnations, and carried off the two best prizes for selfs and Fancies. There were excellent bunches of hardy flowers, Phloxes, Gladioli, Begonias, &c., and there was a similar set of classes in the amateurs' division, in which the competition was generally keen. The section of decorative classes brought some very pretty tables, Messrs. E. S. Cole & Son of Bath were first for one arranged florally for dinner, and Mr. J. Cypher was second. Mr. Cypher had the best epergne, and Mr. W. H. Coles of Bristol was second. Then there were hand bouquets, baskets, and bouquets of wild flowers, &c.

Fruit was, as usual, shown in good character. A new exhibitor, E. Swinfen Eady, Esq., K.C., Weybridge (gardener, Mr. J. Lock), took the first prize for eight dishes. He had excellent Madresfield Court and Muscat of Alexandria Grapes, Sea Eagle Peaches, Early Rivers Nectarine, Figs, &c. Mr. Hall, gardener to Lady Ashburton, Romsey, was second. With four dishes, Mr. W. Mitchell, Romsey, was first, and Mr. W. A. Sandford second. Excellent Grapes were shown in several classes, and there were Peaches, Nectarines, Apricots, Apples, Pears, &c. but the crowd effectually prevented the gathering up of particulars.

Taunton is famous for its splendid vegetables; in the cottagers' as well as in the open classes they were both numerous and very fine. The special prizes offered by some of the large retail seed houses gave a great impetus to the competition. Miscellaneous exhibits added many features of interest. Messrs. R. Veitch & Sons, Exeter, had plants, cut flowers, &c., in great variety and full of interest. Messrs. Kelway and Son of Langport, and I. House & Sons, Bristol, had collections of cut flowers, the former showing Gladioli in great variety, the latter Sweet Peas, Dahlias, &c. Messrs. White, Barr & Son, and Jarman and Co. all had very interesting collections, as did also Messrs. Davis and Slade.

Crystal Palace, August 16th and 17th.

During the month of August in each year the Crystal Palace seems to be largely given over to co-operators, who there have their festival. Horticulturally the interest settles upon the exhibition of fruits, flowers, and vegetables, and this year the above were the dates chosen. This was the sixteenth show, and if it were not quite up to some of its predecessors, the falling off may, we think, be rightly ascribed to the season, which, for Cabbages, Cauliflowers, and Turnips, has been particularly unfavourable. On the other hand, Potatoes, Onions, and Marrows were more than usually excellent, and represented the highest culture. It was a matter for some regret to find that, in the section with which we are about to deal briefly, coarseness in the Tomatoes encouraged by the judges, who awarded the premier prize to over-large specimens with immense eyes, practically perfect examples coming second. Considering the high educational value of the show, this judging more by size than quality ought to be rigidly discouraged.

With the multitudinous classes in what is termed the industrial section it is impossible for us to deal. The growers, it must be understood, are principally of the class who do the whole of their own work, and their productions are more than meritorious. They contribute flowers, fruits, and vegetables, and in every section the competition is keen and the average of quality high. Cut flowers, such

as Asters, Stocks, Sweet Peas, and collections of annuals were, on the present occasion, fine, as were many of the plants in pots and some of the vegetables. Potatoes were decidedly of superior quality, while Tomatoes were splendid.

The present show saw a departure, for with it were associated the collections of produce brought together under the Rural Education Scheme, at whose head is Lady Warwick. For this an entirely separate schedule was compiled, in which were classes for institutions of a character similar to the Reading Hostel, for Home Office schools, for boys and girls cultivating school gardens, and others. Taken as a whole, the produce staged was rough and inferior, and demonstrated the fact that the exhibitors were by no means accustomed to the show tent. The vegetables had not that excellence with which frequenters of present day shows are familiar and expect to find. Some of the flowers were good, notably Dahlias and Sweet Peas. The competition in every class save one was most disappointing to the promoters, who are hoping for much better things in future years. Some control should be exercised by the committee at staging time, for more than one exhibit exceeded the allotted space, while in one class we observed that one grower had three different exhibits.

In the class for a collection of vegetables, ten distinct kinds, Mr. A. Basile, gardener to the Rev. O. L. Powels, was the only exhibitor, and received the premier prize with good produce. The exhibit comprised Onion Ailsa Craig, Cauliflower Early Mammoth, Leek Giant, Carrot New Red Intermediate, Giant Scarlet Runner, Marrow Lane's White, Pea Late Perfection, Tomato Perfection, and Potato International. Messrs. R. Chamberlain, gardener to F. W. Loneygan, Esq., Reading, A. Basile, and W. Emerton, Buckingham, received the prizes for Scarlet Runner Beans, all showings splendidly. For dwarf French Beans Mr. A. Basile was first, Mr. R. Bass, Bromley, second, and Mr. N. E. Stilwell, Bromley, third, all staging Canadian Wonder in excellent form. For Beet Mr. W. Emerton won with Blood Red, and Mr. R. T. Howell with Turnip-rooted. Cabbages were poor; Mr. N. C. Stilwell was first, and Mr. A. Basile second. Mr. G. W. Hunt, Leicester, had the best Red Cabbages, and Mr. A. E. Kirtland, Oxford, the best Red Intermediate Carrots. In the class for a brace of Cucumbers Mr. A. E. Kirtland was easily first with Lockie's Perfection, Mr. W. Emerton was second. Mr. A. Basile had the finest Leeks.

Onions and Potatoes made the best display. For nine Onions grown in the open ground Messrs. R. Chamberlain, A. Basile, and W. Emerton secured the awards in the order here given. The variety in each case was Ailsa Craig. Mr. A. Basile staged Lemon Rocca in the class for autumn sown Onions, and received the leading prize; Mr. J. Martin, Newells, Horsham, was second. For a dish of Peas Mr. R. Chamberlain was first with Autocrat, and Mr. C. Moody second with Exhibition Marrow. For six dishes of Potatoes, distinct varieties, Mr. W. Emerton was first with fine tubers of Supreme, Reading Russet, Lord Tennyson, International Kidney, Lord Raglan, and Purple Perfection. Mr. A. Basile was an excellent second. For two dishes of white Potatoes Mr. Emerton was first with Britannia and Ideal, Mr. A. E. Kirtland being second with Satisfaction and Sensation. Mr. W. Emerton was again first for two red Potatoes with Prizetaker and Reading Russet; Mr. A. E. Kirtland was second with Mr. Bresee and Reading Russet. Mr. A. Basile was placed first for Tomatoes with over-large specimens; Mr. R. Chamberlain with even, medium sized fruits was second. For green Marrows Mr. A. Basile was first; while for white Mr. J. Bugby, Desborough went ahead.

The floral section was attractive and beautiful. Mr. R. Chamberlain had the best six annuals, amongst which Mallows, Coreopsis, Salpiglossis, and Chrysanthemums were especially good. Asters were not so good as is usual at this gathering. Messrs. A. E. Kirtland and W. Emerton shared the awards. For six single Dahlias Mr. C. Osman, Chertsey, was first. For a dozen Cactus Dahlias Messrs. H. A. Needs and W. Baxter were respectively first and second, both showing excellently. African Marigolds were splendidly staged by Mr. J. Panter, Desborough, and Mr. N. C. Stilwell had very fine Mignonette. Mr. R. Chamberlain won for Sweet Peas and hardy herbaceous flowers, showing admirably in each instance. Mr. J. Wilby had the finest single Zonal Pelargoniums, Mr. C. Moody being ahead with doubles. Annuals in pots were well grown, but we have not space for particulars.

Mr. W. J. Stowers, Sittingbourne, was a splendid first for three dishes of cooking Apples with Lord Suffield, Peasgood's Nonesuch, and Ecklinville. Mr. T. Osman, gardener to L. J. Baker, Esq., Chertsey, was second. Mr. W. Stowers also won with three dishes dessert Apples with Beauty of Bath, Lady Sudeley, and Duchess' Favourite. Mr. T. Osman was first for a collection of six kinds of fruit with Melon Windsor Castle, Nectarine Dryden, Peach Stirling Castle, Grapes Black Hamburg and Muscat of Alexandria, and Apple Red Astrachan. Mr. T. Osman was also first for six dishes open-air fruits with Peach Hale's Early, Nectarine Early Rivers, Fig Brown Turkey, Cherry Morello, and Apricot Moorpark. Mr. J. Panter was second. Mr. W. Taylor had the best black Grapes, Mr. T. Osman following. In the class for white Grapes the order was reversed. Mr. W. Taylor won with Nectarines, and Mr. J. Powell with Peaches. For three dishes of dessert Pears Mr. A. Basile was first with Pitmaston Duchess, Marguerite Marrillat, and Benr   Clairgeau. Mr. W. Taylor was first for two dishes of Plums. The educational class for fruits, vegetables, and flowers was won by Mr. S. Chamberlain with 101 points, Mr. T. Osman being unfortunately disqualified for not conforming to the rules; he scored 103 points exclusive of Apricots, which were not allowed.

Birmingham Gardeners' Association.

A "detachment" of about a score of the fraternity of this society on the 15th availed themselves of the opportunity of visiting (by kind permission of T. W. Webley, Esq.) the charming and most interesting pleasure grounds of his suburban residence, The Uplands, Selly Hill, near Birmingham. Photographic illustrations of the rockery and garden streamlet of this place were pleasingly reproduced in the Journal for September, 1899. The party was chaperoned by Mr. William Spiuks, who was responsible for the designing and laying out of the grounds in general, much credit likewise being due to him for the good taste and judgment evinced in the selection and planting, more especially of that pertaining to the rockery and water gardens.

Unfortunately the afternoon of the date in question proved not the most auspicious, as a drizzling rain prevailed, though not so far as to preclude a thorough and leisurely inspection of the numerous garden scenes presented at every turn. The most enchanting of all was the streamlet with its various placid lakelets, the rocky margins of which are exquisitely clothed with a large variety of suitable shrubs and waterside plants. More than one lakelet, terraced, so to speak, one above another, displayed thriving plants of several of the superb Marliac Lilies, and further enhanced by lively motions of resplendent gold fish in their shallow rocky aquariums. Considerable interest was also centred in the extensive fruit garden, with its hundreds of standard and pyramidal Apple and Pear trees, planted in long lines in several divisions, with well-kept grass walks between, and of the rows of trees being apportioned each to one variety of Apple or Pear.

Of dessert Apples King of the Pippins appeared to be the most prolific. Several varieties, both dessert and culinary, were in fairly good cropping condition, otherwise the crop was light or nil as regards the majority of both Apples and Pears, especially the latter, attributable chiefly to the unfavourable state of the weather during the blossoming period. Several of the trees were also evincing the severe ordeal they had been subjected to from the lifting or root-pruning process practised upon the over-luxuriant proportion of them.

A meed of praise must be accorded to Mr. Fawdery, the industrious and capable gardener in charge, for the way in which he executes his onerous duties, and the general good keeping everywhere apparent, weeds being conspicuous by their absence.—W. G.

Cardiff Gardeners' Association.

The annual outing of the members took place on August 12th, when a good party journeyed to Kew Gardens, where luncheon was served at the Rose and Crown Hotel, Mr. G. Tolman, the chairman, presiding, supported by Mr. Thos. Malpass, hon. treasurer, and Mr. J. Julian, hon. secretary (conductor of the party). A brief toast list was gone through, and a move was made for Dover House, Roehampton, the seat of Mr. J. P. Morgan (millionaire of steel fame), and whose gardens are in charge of Mr. J. McLeod, whose abilities as a high-class gardener were plainly shown by the way everything had received attention. The garden was simply a model of cleanliness. A large area of glass is devoted to Peach culture in various stages of growth, all remarkably healthy, vigorous, and fine fruiting wood; in fact, the scarcity of gross wood indicated that their rooting propensities were perfect. Carnations are done well there, and very fine batches now in the course of preparation for future use. Melons and Tomatoes were certainly doing well, the latter planted in boxes. The fruit garden was excellently well stocked with many of the very best kinds in great variety, and many of the Apple and Pear trees were perfect pictures, carrying heavy crops of good shaped fruits. The pruning knife has been used for some years past in this, as well as other departments, in a manner in which only a master of the art can use it; and quite a treat to see how well the sun and air could perform their share towards developing fine fruits, and mature the buds for next season's supply. On the lawns were many fine specimens of trees; particularly noteworthy were a fine Purple Beech (as fine as is possible to find), also an Ailantus and Judas Tree. Six dwarf and very old Conifers, costing nearly £700, stood in vases, this department having evidently suffered most acutely from the late drought.

¶ After viewing a portion of the kitchen gardens, which was abundantly stocked with the best kinds, a splendid tea was served and thoroughly enjoyed, thanks to Mr. McLeod's hospitality, and wishing him good-bye, a move was made for Manresa House for the purpose of viewing the large Vine, remarkable for its robust growths, healthy foliage, and fine bunches of Grapes. The house is 223 feet long, the Vine planted nearly in the middle, and extending its enormous rods from end to end, and from the bottom to the top of the house (which is a lean-to about 18 feet high), and the great thickness of bark goes well to show that these gardens are a natural Vine border in themselves to produce such growth in a Vine thirty-six years old. Several other Vines, also of a good size, produced exactly the same class of wood. Several of the members having seen the historic Vine at Hampton Court, also the one at Cumberland Lodge, say that if anyone wants any further insight into Vine culture, they can certainly get it at Manresa House. There are 15 acres of garden devoted to fruit and vegetable culture, all looking well. Bidding Mr. Davies, the courteous head gardener, good-bye, the party spent the remainder of the time in London, returning to Cardiff at 2 A.M. Tuesday morning, having spent a most enjoyable holiday.—J. JULIAN.



Hardy Fruit Garden.

Cleansing Fruit Room.—It is desirable, before a commencement is made to store choice fruit in any quantity, that the place of storage, which, where there is much fruit, should be a properly constructed fruit room, ought to be made sweet, clean, and thoroughly dry. The whole of the woodwork, including shelves, must be washed with soap and hot water in which soda has been dissolved; the walls require limewashing, and the floor well scrubbed. Not a particle of anything which will decompose should be left behind, and when finished throw open the structure to its full extent, so that it may thoroughly dry.

Apples.—The early maturing varieties will be ready to gather for immediate use, or, if not allowed to hang long, detached immediately and stored for a short time. Where the trees are fairly well loaded with fruit this is a good season to relieve them of small and indifferent shaped fruits; the removal will improve the chances of the best samples, and enable them to swell to a larger size. The best fruits take the lead, and should be encouraged. It is best, if possible, to remove the small fruits attacked with the Apple maggot, and fruits which have fallen from this cause ought to be picked up, and not allowed to remain until the grub escapes. The summer pruning of all restricted trees should now be completed; the forms of trees to be dealt with include cordon, espalier, horizontally trained, and low bushes. Superfluous shoots may be removed entirely, and the rest shortened to five or six leaves.

Pears.—The trees of early ripening varieties ought to be frequently looked over, so as to gather the most forward fruits as they become ready. When they show the first tinge of colour, and, on lifting, part readily from the wood, it is not desirable to leave them longer, but gather and store them in the fruit room, where they will develop ripeness and flavour. Care must be exercised in gathering, as Pears are peculiarly susceptible to bruises, and soon show the effects of rough handling. As the fruits are gathered lay them on soft materials in a basket, which should be carried to the fruit room, and the specimens taken out carefully and laid in a single layer on a shelf.

Plums.—The fruit of trees on walls and espalier fences should be exposed to the sun as much as possible, so that the fruits may attain to good development, colour, and ripening. To enable this to be done tie back the summer shoots, or if spurs are to be encouraged, shorten them to five or six leaves. As fruits ripen gather them for immediate use. If wasps are troublesome about the trees hang bottles containing thin fruit syrup, to which they will be attracted. The later varieties of Plums may still be thinned, removing the small and deformed fruits.

Cherries.—The wood of wall trees should be thinned out, reserving the best placed for securing in to the wall for future bearing. The bare parts of old branches may be covered with young shoots, not, however, overcrowding. Weak and ill-placed growths cut out entirely, and make a selection of the rest which are not required for laying in, shortening these to four or five leaves. The above applies to Sweet Cherries. Morello Cherries grown on walls are usually furnished with plenty of young wood, as it is upon these growths that fine crops of fruit are secured, therefore lay in plenty of wood of this character. After the fruit has been gathered the old bearing shoots may be cut out. This will give room for the reserved growths. Spur growths are not nearly so requisite, but some may be encouraged. They are useful for furnishing parts where perhaps young growths cannot be utilised. Trees still carrying ripe fruit ought to have the latter netted up, which enables it to keep for some time longer. Red spider frequently attacks the foliage of Cherries. It is often owing to dryness at the roots. Syringe the trees frequently after the crop has been gathered.

Peaches and Nectarines.—Attention to details enables the fruit to thoroughly well ripen and finish. Adequate moisture at the roots is important. It enables the fruit to develop all the natural juices which assist in bringing it to perfection. It prevents, or at least decreases, insect attacks. Lay in to the wall or trellis the young wood which is to be retained, cutting out the superfluous. By doing this the fruit is better exposed to sunshine, but if leaves hang over and shade the fruit draw them on one side. Shaded fruit seldom colours, and the flavour of the fruit is impaired. Young trees growing vigorously ought to be lifted carefully and replanted, this giving them a check. Regulate the branches as far as possible in an even manner. The best growths are those of medium strength.

Strawberries.—*Cleaning Beds.*—This is very important at the present time. The growth of weeds and runners forms a tangled mass, and prevents the proper building up of the crowns. Clear off all superfluous material which can be readily removed after the runners and the large old foliage have been cut. Hoe the ground between the rows afterwards.

Planting New Beds.—With good well-rooted runners in pots, a bed may yet be planted which will furnish a more or less excellent crop the first season. The balls of roots should, however, be thoroughly moist at

the time of planting, and water afforded afterwards to establish them. Rooted runners from the open ground, lifted with abundance of roots, and planted firmly, make excellent stock for new maincrop plantations. —LYMINGTON, HANTS.

Fruit Forcing.

Peaches and Nectarines.—*Early Forced Trees.*—The leaves, in consequence of the drouthy weather, are maturing earlier than usual, and will soon be off, but there must not be any attempt to forcibly remove them, and every effort should be made to keep them clean, as red spider sometimes becomes rampant where syringing the trees is not practised occasionally after the fruit has been gathered, or an insecticide not applied and repeated to annihilate the pest. When the trees are leafless loosen the branches from the trellis, cleanse the house, attending to needful repairs, and painting the woodwork and trellis. Whatever pruning is necessary should be done as soon as the house is put in order. Early forced trees do not usually make a strong growth, therefore extensions may be retained their full length where not interfering with the equilibrium of the head, or it is not considered advisable to shorten them in order to induce growths for forming branches at desired points. Side shoots may also be left their entire length provided they do not interfere with neighbouring growths, or are likely to appropriate too much nourishment to the prejudice of adjacent bearing or extension shoots. All shortening should be to a wood bud, whether a single, double, or triple bud, one of the two latter being a wood bud. Cut out all weakly wood, yet retaining sufficient of last season's shoots to insure a good prospect of a full crop of fruit. Dress the trees with an insecticide. For years the insecticide used by us has been composed of softsoap $1\frac{1}{2}$ lb., paraffin oil $\frac{1}{2}$ pint, water 6 gallons. The softsoap is dissolved in gallon of water by boiling; when dissolved, and while boiling hot, but removed from the fire for safety, the paraffin oil is added, and the mixture whipped with a switch formed of birch twigs from an old broom, until formed into a cream-like consistency and even amalgamation, adding the remainder of the water boiling hot, and mixing well, applying with a brush at a temperature of 130° to 135° . The advertised insecticides answer quite as well, only take care to follow the instructions explicitly. In applying insecticides be particular to reach every part, and use the brush in such manner as not to disturb the buds. Trees cleaned and neatly secured to the trellis look and are better than those left untrimmed until the latest period before starting. Remove the mulching and loose surface soil, giving fresh loam with an admixture of a fifth of thoroughly decayed manure, and sprinkle on the surface about 4 ozs. per square yard of the following mixture:—Dissolved bones, dry and crumbling, three parts; double sulphate of potash and magnesia, two parts; and ground gypsum, one part; mixed. Scratch or point the mixture in very lightly with a fork. By the time the trees are started, or soon afterwards, the nutrients will have become assimilated or rendered available in the soil for taking in by the roots, and the trees will profit accordingly both in growth and fruit.

Planting or Lifting Trees for Early Forcing.—Where new houses or fresh trees have to be planted, and fruit is wanted at an early period, the trees should be inserted at as early a time as consistent with safety. The most suitable trees are those that have been trained three or four years under glass, or against walls, and have been lifted annually or biennially. Those against walls intended for moving to be started early, ought now, if there is any tendency to a late growth, or any doubt as to the maturity of the wood and buds, to have the soil taken out as deeply as the roots one-third the distance from the stem that the trees extend, letting the trench remain open a fortnight or three weeks, when it may be filled in, but do not allow the trees to suffer for insufficient supplies of water whilst the trench is open. This will effectually check the growth and insure its ripening, whilst it will materially assist lifting with a mass of fibrous roots. Plant the trees for early forcing by the end of September or early in October. Lifting early forced trees should commence as soon as the leaves give indications of falling. Soil and drainage materials ought to be in readiness. The mould may consist of any good loam, preferably rather strong and calcareous. Any deficiency of calcareous substance may be overcome by an addition of chalk to sandy soil, and of old mortar rubbish to heavy material. On light land the soil should be well compacted, an addition of clay marl being very desirable. New borders must have efficient drainage, the bottom of the border being concreted if the strata beneath be unfavourable; or, better, laid with bricks on flat run in cement, the border being enclosed with walls so as to confine the roots, but it must have 3-inch drains, with proper fall and outlet, the bottom of the border, whether of concrete or cement, falling to the drain. A border one-third the width of the trellis will be sufficient in the first instance, and need not at any time exceed the width of the trellis. The best varieties for very early forcing are Alexander, Early Louise, Hale's Early, Stirling Castle, Royal George, and Condor Peaches; Cardinal, Early Rivers, Lord Napier, and Stanwick Elruge Nectarines.

Succession Houses.—Where the fruit is all gathered, cut out the wood that has borne fruit this season unless forming extensions, and the shoots for next year's fruiting, where too crowded, should be thinned to admit light and air. Supply water to the roots, so as to keep the soil in a moist condition. Weakly trees will be benefited by the application of liquid manure, or a top-dressing of fertiliser washed in. Ventilate the house fully day and night. Where the fruit is ripening water should be withheld from the trees and fruit, as the water

causes the skin to become cracked, and fungoid growths seizing on the exposed flesh impart a musty unpleasant flavour. The soil, however, must be kept properly moistened, and air moisture provided by damping the floor and border occasionally, or whenever the surface becomes dry. This will benefit the foliage and not do any harm to the fruit, providing the ventilation is free and a little left on constantly. When the fruit ripens too rapidly, a slight shade, such as tiffany or thin scrim canvas drawn on to the roof-lights, will be advantageous, and may prevent the fruit shrivelling at the apex, this occurring frequently when exposed to the direct rays of the sun.

Late Houses.—Let the fruit have full exposure to the light, drawing the leaves aside, and raising depending fruit, with its apex to the sun, by placing laths crosswise of the trellis. Keep the growths tied as they advance in length. Laterals should be pinched to one leaf, but in the case of trees carrying heavy crops they may be allowed moderate extension. Continue syringing in the morning and afternoon on fine days, until the fruit commences ripening. Provide a little ventilation constantly, and increase it early in the day. Afford sufficient water to the inside and outside border to keep the soil down to the drainage in a moist state, but avoid making sodden and sour by needless applications. A light mulching of short lumpy manure will tend to keep the soil moist and encourage surface rooting.—ST. ALBANS

Trade Catalogues Received.

- William Bull, 536, King's Road, Chelsea, S.W.—*Hyacinths, Tulips, Crocus, and tuberous rooted plants.*
- Wm. Clibran & Son, Oldfield Nurseries, Altrincham.—*Clibran's Bulbs.*
- Wm. Cutbush & Son, Highgate Nurseries, London, and Barnet, Herts.—*Carnations.*
- Dobie & Mason, 22, Oak Street, Manchester.—*Dutch and French flowering Bulbs.*
- W. Baylor Hartland, Ard-Cairn Nurseries, Cork.—*Daffodils, Single Tulips.*
- Hartley & Sugden, Ltd., Halifax, England.—*New and Revised Catalogue of Heating Apparatus Boilers.*
- E. H. Krelage & Son, Haarlem, Holland.—*Dutch Bulbs, 1901.*
- John Peed & Son, West Norwood, London, S.E.—*Bulbs.*
- Albert F. Upstone, 35, Church Street, Rotherham, Yorks.—*Bulbs.*
- Vilmorin, Andrieux & Co., 4, Quai de la Mégisserie, Paris.—*Flowering Bulbs and Strawberries.*
- B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, London, N.—*Bulbs; also Catalogue of Fruits, Shrubs, Carnations, and Herbaceous Plants.*

Next Week's Events.

- Friday, August 23rd.—Rock Ferry Horticultural Society's Exhibition.
- Saturday, August 24th.—Newton, Earlestown and District Horticultural Society (Liverpool).
- Monday, August 26th.—Sharrow and District Floral and Horticultural Society's Show.
- Tuesday, August 27th.—Brighton and Sussex Horticultural Society's Summer Show at the Royal Pavilion (two days).
- Wednesday, August 28th.—Glasgow International Exhibition, in association with Glasgow and West of Scotland Horticultural Society, £1000 in prizes (two days); Westerham Horticultural Society's Show.
- Thursday, August 29th.—Sandy Exhibition; Wellingborough Dahlia Show.

Phenological Observations.

AUGUST 23RD TO AUGUST 29TH.		PLANTS DEDICATED TO EACH DAY.	
23 Fri.	Gold-spot moth seen.	Tansy.	
24 Sat.	Starlings flock together.	Sunflower.	
25 Sun.	Winged ants migrate.	Perennial Sunflower.	
26 Mon.	Grey plover comes.	Banded Amaryllis.	
27 Tu.	"Knot" arrives.	Hedge Hawkweed.	
28 Wed.	Fruits of Berberis ripe.	Golden Rod.	
29 Thr.	Martins collect on roofs.	Yellow Hollyhock.	



TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Gillenia trifoliata (Dumbarton).—Quite hardy, and one of the finest little herbaceous border plants you could select. It loves a good loamy soil in a warm situation. You could obtain plants from a nurseryman during autumn or next spring. Our illustration shows its elegant habit; the flowers are white.

Plants to Name (H. Guildford).—No. 1 appears to be *Cestrum aurantiacum*, an excellent cool house evergreen shrub, with orange-coloured flowers produced in August onward through the autumn and winter. No. 2 is a variety of Star Tulip or Mariposa Lily, and most accords with *Calochortus luteus*; the specimens, however, were much dried and shrivelled. (Daniel Holby).—The shrub is *Chionanthus virginica* var. *maritima*, or The Snowflower.

Recipe for Tomato Chutney (Reader).—Take fifteen large unripe Apples, fifteen Tomatoes, 1 lb. moist sugar, 1 lb. Onions, $\frac{1}{2}$ lb. raisins, $\frac{1}{2}$ lb. sultanas, $\frac{1}{4}$ lb. salt, $\frac{1}{2}$ lb. Mustard seed, 2 ozs. powdered ginger, 2 ozs. powdered chilies, and 3 pints vinegar. Peel, core, and slice the Apples and Tomatoes; stone the raisins, and wash the sultanas in vinegar. The Onions must be finely chopped. Take skins and cores of Apples and boil them to a pulp in 1 pint of water. Boil the Apples and Onions in the pulp till quite tender, with a little of the vinegar, then add all the other ingredients with the remaining vinegar. It must be well stirred. It will take about four hours to prepare.

Small Kind of White Wireworm at the Roots of Cinerarias (H. Guildford).—We do not know of a small kind of white wireworm that attacks Cinerarias at the roots, causing the foliage to flag and the plants to die off; but we have frequently had experience of the destructive habits of the caterpillars of the garden swift moth, *Hepialus lupulinus*, which, working on the roots and root-stem just below the surface of the soil, causes the destruction of the plants. The caterpillars are cylindrical, yellowish-

white, with a brown horny head, and we have known them pass from a plant they have eaten the heart out of—that is, the stem just below or level with the surface—to another, serving it in the same way, and so on, one caterpillar being capable of doing a lot of mischief. We do not know of any better means of riddance than carefully examining each plant with a pointed piece of wood round the base and finding the caterpillar and destroying it. Soot water is a good deterrent of the caterpillar, and also valuable food for the Cinerarias. Perhaps a weak solution of Little's soluble phenyle, say 1 fluid oz. to 6 $\frac{1}{2}$ gallons of water, would be useful in making the caterpillar shift its quarters, and, coming to the surface, be readily captured and destroyed; if, indeed, it would not destroy the pest. The solution should be applied in about the same amount as in an ordinary watering with water. Tar water, made by boiling 1 oz. of gas tar in a quart of water for about half an hour, or until it will readily mix with water, then diluting to 6 $\frac{1}{2}$ gallons, may be used similarly, and is likely to act in like manner. Possibly either solution may have a slightly prejudicial effect on the Cinerarias, but this will shortly be recovered from. Nitrate of soda solution, 1 oz. to 2 gallons of water, also has a good effect on the plants, and stupefies, if not kills, the caterpillars.



GILLENIA TRIFOLIATA.

Diseased Tomato (G. R. M.).—The fruit is affected at the eye by the Tomato black rot fungus (*Macrosporium Tomato*), which is a wound parasite, and on the germ-tube most frequently effects an entrance through minute cracks round the style, or at the point of insertion of the stem. A dark coloured mycelium forms in the tissues and rapidly destroys the cells, consequently the area occupied by the fungus sinks a little below the general surface of the healthy part of the fruit. At a later stage the sunken surface of a diseased spot becomes covered with a delicate, velvety pile of a brownish or blackish olive colour, which under the microscope is found to consist of closely packed dark coloured conidiophores, each bearing a dark many-celled conidium at its tip. The conidia when mature germinate quickly in water, each cell of a spore producing a germ-tube capable of entering a Tomato if placed on a wounded surface, or where the skin has been weakened by water lodging on it, as is most common at the eye and heel of the fruit, and on these the affection most commonly occurs. There is no remedy, as the fungus is an internal parasite, therefore all diseased fruits should be cleared away and burned. Seed should not be saved from diseased plants, for the fungus also affects leaves and stems as well as fruit. The use of green stable manure is considered to favour the disease, and also causes the fruit to crack, thus favouring attacks by the fungus. Thorough spraying with potassium sulphide solution, 1 oz. to 6 gallons of water, at frequent intervals, is regarded as the best preventive means. Culturally a dry condition of the fruit is the best safeguard against the disease.

Name of Passion Flower from Leaves and Description (W. G.).—The leaves and shoot accord with those of *Passiflora princeps*, syn. *P. racemosa* of botanists, the *P. racemosa* of gardeners and nurserymen being a variety of the blue flowered Passion Flower, and known as *Passiflora cærulea racemosa*. We have grown it for over thirty years as *P. princeps*, and under that name is grown by most nurserymen. The flowers are of a deep red or scarlet colour, produced in terminal pendulous racemes of considerable length, and very useful for cutting. It flowers very freely from the old wood, producing several racemes of flowers from a joint, and this not once but several times, so that the plant is seldom out of flower. It does best planted out, the roots being partially restricted, and a depth of soil not exceeding 18 inches over thorough drainage is sufficient. A compost of three parts turfy loam, one part fibrous peat, and half a part each of "nuts" charcoal and sharp sand intermixed. It may be grown in large pots or tubs. The growths should be trained thinly and near the glass, we training the shoots to the roof wires beneath the rafters, and have racemes for cutting almost the year round, often at the dullest period of the year. As it flowers from the old wood far better than the young, we retain a large percentage of the stems or branches, cutting the young away to a few joints, having no more young growths than sufficient to render the rafters pleasing to the eye, as the scarlet racemes borne from the joints of the wood one year old and older are of most importance and finest. It requires a stove temperature, being a native of Brazil. A plant may be procured of any of the principal nurserymen, such as Messrs. Jas. Veitch & Sons, Royal Exotic Nursery, King's Road, Chelsea, London, S.W.

Shrub Affected with a Peculiar Fungoid Disease (Torquay).—The young shoots of the shrub, evidently the narrow-leaved *Alaternus* (*Rhamnus Alaternus angustifolius*), are affected by the æcidium form of the fungus named in the final stage *Puccinia coronata*, which produces a rust on cereals, being frequently met with on Wheat, Barley, Rye, Oats, and many wild Grasses. The æcidium form, *Æcidium Rhamni*, produces peculiar rich golden yellow swellings, or cluster-cups, on the young growths (leaves and shoots) of various species of *Rhamnus*, including *R. catharticus*, *R. Frangula*, and, in your case, the first to our notice, *R. Alaternus*. The orange, or rich golden yellow, spores of this infest cereals and wild Grasses, and give rise to rust, or the uredospore condition, the spores, also yellow, being produced in pustules on the upper surface of the leaves, less frequently on the leaf-sheath, culm, and chaff; the final, or telentospore, pustules or sori are black, minute, and often form irregular rings. These telentospores, or *Puccinia coronata*, so called because the apex of the telentospore is ornamented with a varying number of blunt projections, survive the winter, then push pro-mycelium, and produce spores, which infect the leaves, sometimes the flowers and fruit, of various species of Buckthorn, *Rhamnus*, and the cluster-cups, or *Æcidium Rhamni*, appears, as in the case of your specimens. The cause, therefore, is the fungus. As regards remedy, the only one likely to be of any real service is to cut off the affected shoots before the cluster-cups have the æcidiospores mature, and burn them, for if left until they shed a golden dust there is almost certain recurrence of the disease. Removing the cereals and Grasses on which the *Puccinia coronata* occurs is not practicable, and it is only right to say that this occurs where there are not any plants of *Rhamnus* within many miles of the infested cereals and Grasses, so that the *Æcidium Rhamni* may possibly act independently, though fungologists are "dead" against that being possible. In the *Journal of Horticulture*, vol. ix., third series, page 40, Mr. Graham gives an account of successful treatment of a similar fungus affecting Gooseberry bushes. He says:—"I gave the ground amongst the bushes a liberal dressing with lime in the autumn, and syringed over them a compound of alum 1 drachm; tobacco essence, 2 drachms; flowers of sulphur, $\frac{1}{2}$ oz.; common salt, $\frac{3}{4}$ oz., all mixed in 3 gallons of rain water; this was done twice before the expanding of the leaves, and again as soon as the

fruit was fairly set, and my Gooseberry bushes are now free from all traces of the fungus." Perhaps the treatment may answer also in the case of the *Alaternus*; or the shrub may be sprayed with potassium sulphide solution, 1 oz. to 2½ gallons of water: 1, as soon as the leaves unfold; 2, in ten days or a fortnight after the first application; and 3, a third spraying in fourteen or twenty-one days after the second.

Nectarines Splitting at Stone and Dropping before Ripe (T. O.).—This is a very perplexing matter, and is peculiar to some varieties, others, under an identity of circumstances, being quite free from the defect. The late Mr. Thomas Rivers attributed splitting at the stone to imperfect fertilisation, and advised cross-fertilisation, or taking pollen from another variety and carefully applying it to the flowers of the tree liable to split at the stone. This has been attended with good results in some cases, not in all, for where it occurs in slight degree we have found lifting the tree and replanting in firm soil, so as to insure a thorough solidification of the fruit in all its stages of growth, the most satisfactory, as the trees most subject to splitting are generally vigorous in growth and swell the fruit largely at the second swelling. In some cases the defect is purely constitutional, and in such instances it is advisable to remove it and plant another in its stead of a variety not found to split at the stone under similar circumstances.

Leucadendron argenteum Growing in an Ordinary Greenhouse (T. C. S.).—Yes, the Wittebroom or Silver Tree of the Cape colonists may be grown in an ordinary greenhouse, warmed in winter, it being a native of Southern Africa. A very handsome tree, too rarely seen in cultivation, for though the yellow flowers produced in terminal heads are of very little beauty, the closely set leaves, lanceolate, 4 to 6 inches long, and 1 inch broad, are of a very beautiful silvery white. These, in the dried state, are imported, and largely used in the making of wreaths, &c. It attains a height of 15 feet or more, therefore requires a rather lofty house. *Cycas revoluta* has "fits" of growth, sometimes not throwing up fronds, and then does so freely after resting a year or two. It is a native of China, and does well in either a stove, greenhouse, or conservatory; indeed, old plants are very fine for sub-tropical gardening, placing in a warm and sheltered position, where it may remain from May till September. We do not recognise the plant by the leaves, though they probably belong to a Sumach, they resembling those of *Rhus coriaria*, a shrub or low tree.

Apricots Going Rotten on the Trees (A. T. J.).—The fruits are affected by the brown rot of fruit, *Monilia fructigena*. The fungus attacks Apples, Apricots, Cherries, Nectarines, Peaches, Pears, and Plums, and is one of the commonest and most widely distributed of moulds against which the fruit grower has to contend. To the casual observer it is best known on the fruit, but it occurs on the young shoots, leaves, and even the flowers. On the leaves it forms thin velvety patches, consisting of chains of conidia or spores, and these falling on fruit infect it, and decay sets in, usually in the case of stone fruit at the apex. Decay proceeds to a certain extent, and the fruit becomes shrivelled. Numerous blackish sclerotia are formed in the diseased fruit, which on the return of spring bear a crop of spores, which on the young leaves infect them, and a recurrence of the disease ensues. All diseased fruits should, therefore, be collected and burned, and the trees sprayed with a solution of copper sulphate, 1 oz. to 1½ gallon of water, in early spring before the buds expand, and after the buds expand with ammoniacal solution of copper carbonate, repeating as soon as the fruit is fairly set, and once or twice at intervals of a fortnight. As this is poisonous, and green Apricots used for tarts, sulphide of potassium solution, 1 oz. to 6 gallons, may be used instead, there not being the same objection to its use outdoors as under glass. It is not advisable to use copper solutions late on the fruit, as this remains more or less, and may prove dangerous unless washed off. The Apple appears to be Beauty of Bath.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.		deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
August.										
Sunday ..11	S.S.W.	63°0	55°0	70°2	46°2	0·05	66·5	64°3	60°4	37·3
Monday ..12	S.S.W.	60°9	56°2	68°2	52°2	0 01	65·5	64°2	60°4	44°4
Tuesday 13	S.W.	63°8	56°0	71°5	51°5	—	63°9	63°8	60°4	42°8
Wed'sday 14	S.W.	70°4	61°5	70°8	57°0	0·33	65·3	63°5	60°5	51°0
Thursday 15	S.W.	64°2	60°2	71°0	57°5	0·12	64·5	63°3	60°5	54°3
Friday .. 16	W.	62°7	52°7	71°0	52°5	—	64°0	63°2	60°5	49°5
Saturday 17	S.W.	66°9	57°9	72°5	46°9	—	63·5	63°2	60°4	42·2
MEANS ..		64·6	57·1	70·7	52·0	Total 0·51	64·7	63·6	60·4	45 9

There has been a good deal of dull weather during the past week, with a fair quantity of rain on 14th and 15th.



The Value of Straw.

It is now several years since the grain fields of this country developed a bulk of straw above the average, and during the last two or three the shortage has been so marked that the stocks at midsummer have been reduced to the smallest possible compass, practically nothing being carried over for autumn use. Many farmers are in the habit of saving a good lump of old Oat straw to cut for the horses during the autumn ploughing and sowing; it makes good sound food for them, and also prevents premature threshing of half-sweated stacks. Stacks of Oat straw are very rare at the present time, and far too many people will have to thresh Wheat before they can thatch their harvest and make it safe. It is but eighteen months since we were offered Wheat straw at £1 per ton, and we called attention to it as an excellent medium for investment.

The great shrinkage in the crops of hay, resulting in a considerable rise of the price, has much enhanced the importance of the supply of straw, and that it is most desirable that straw should be used in the most economical manner cannot be doubted. We are of opinion that there is great room for improvement in this respect, especially on large arable farms in the peculiarly Corn-growing counties. As long as there is plenty of bedding and fodder for his usual head of stock and manure for his Turnips the farmer is satisfied; but with improved methods more cattle might be wintered on the same straw supply, and both the grazier and the country at large would benefit. If the British farmer is to be protected from the incursion of disease by restrictions on importation, he on his side must show more energy in the production of meat-bearing animals, and this can only be done by stricter economy. Looking back thirty years, few farmers cut straw for their cattle, and that for use by the horses was cut by hand. Now, travelling cut-boxes may be seen on every hand, and it is almost the rule for Oat or Barley straw to be cut up as it is threshed.

The efforts of the most enterprising farmers are largely directed to making use of their straw as food, and by the aid of covered yards and peat moss litter some are able to do so almost entirely. To put straw through the animals' stomachs with good results, nevertheless, depends much on the nature and quality of it. Coarse Wheat straw contains such a proportion of strong knots that its passage through delicate stomachs is attended by considerable difficulty and danger. The same thing applies to Oat and Barley straw if it has been much weathered, especially if it was over-ripe before being cut. That the cutting of grain crops before they are too ripe has a very great effect on the value of the straw is well known, but few are aware of the great differences which are shown by a study of the following table, the result of investigations by the late Dr. Voelcker. The figures refer to Oat straw.

	Cut rather green.		Fairly ripe.		Over-ripe.	
Water	16.00	...	16.00	...	16.00
Albuminoids	8.49	...	4.08	...	3.65
Oil	1.57	...	1.05	...	1.25
Sugar, mucilage, &c.	16.04	...	10.57	...	3.19
Woody fibre digestible	26.34	...	30.17	...	27.75
" " indigestible	24.86	...	31.78	...	41.82
Mineral matter	6.70	...	6.35	...	6.34
		100.00		100.00		100.00

It is remarkable that the water and mineral matter are almost identical in all three samples, but the over-ripe straw contains 17 per cent. more indigestible matter than that cut rather green, 1 per cent. more woody digestible fibre, but 18 per cent. less albuminoids, oil and sugar, which are the only valuable properties of the straw. Practically speaking, the green straw is worth three times as much as the other for feeding purposes, besides being a much safer food for young stock. When deciding on the most suitable time for cutting a field of Oats we have often put into practice an old rule, to wait until we saw a few grains on the ground, and then cut at once. The figures of Dr. Voelcker's analysis go a long way to show that we might advantageously have cut sooner, that we might have saved those few grains, whilst what the more backward portions of the ears lacked in maturity would have been amply compensated for by increased feeding value in the straw. As an object lesson in such practice, we have had near us for many years a farmer who has always been noted for cutting his Corn green. He has always maintained a tremendous head of stock upon his farm, and, as far as we know, his grain did not suffer either in yield or quality. He certainly has been often fortunate in getting all in just before a weather break. But how

to make the best use of the straw when saved? Well, though all farmers do not believe in it, we have immense faith in the economy of the chaff-cutter. All straw and hay for meat production should be cut up, and Wheat straw for bedding, covered yards, sheds, or boxes will go much further if made into long chaff. Of course, there is the labour and expense of cutting, but it is really very small, if there is a sufficiency of barn accommodation, so that the chaff may be blown there direct from the cutter. In this case there is economy of labour, for the chaff will only require spreading and treading by one man, whereas the straw stack will take two. The difference between the hire of a straw-elevator and a chaff-cutter may be put down at 7s. So, if we deduct from this 3s. for one man, we find 4s. plus a very small item in coals to be the extra cost of cutting.

There are many good ways of mixing and using the chaffed straw, and if the straw be good the farmer can hardly go wrong; but there is a great deal in making weathered and almost rotten but dry stuff into a palatable and nutritious food. Steaming is no doubt one of the most effective ways of bringing this about; if the chaff be mixed with a small amount of pulped root, malt culm, or dried grains, and then steamed, it will be relished by stock, and they will do well on it.

The late Mr. S. Jonas had a system of cutting up his straw when threshing, and mixing a small quantity of green chop (1 cwt. to the ton) with it. This green stuff was sufficient to cause fermentation, which very greatly improved the feeding value of the mixture. In a sense it was a process of cooking. When green food for mixing was not available, pulped roots were used instead, and Mr. Jonas' son has since used pulped Mangold, as being more readily available even in summer. Boiled linseed is very largely used for mixing with chaff, 1 lb. of linseed per head per day is quite sufficient. After being made into soup, so much is thrown over each layer of chaff, the whole is turned over and well mixed; the meal allowance is then mixed with the heap, which is turned again and left until required.

Where roots are plentiful, and large quantities are pulped and given mixed with chaff, the cattle always like the mixture better for being twenty-four hours old. One man we had, and he was a successful feeder, would have kept his mixture for three days if space would have allowed him. No doubt he was right, and the process of natural heating as good as a steaming, if it could have been properly controlled; but when using roots largely, the amount of moisture would cause the ferment to be too rapid, and if not watched to go beyond the most wholesome stage before the food could be used. A small quantity of salt should be mixed amongst all food of this description.

Where roots are scarce or not available, a mixture of spices added to the cut straw will do much to make it palatable. Most country chemists sell suitable mixtures for the purpose. Cattle spice is often mixed with badly damaged hay when stacking, a quantity being scattered over the stack after each cartload, and it gives an attractive smell to the hay which would otherwise be lacking.

Thousands of farm horses are wintered without any hay whatever, being fed on cut Barley or Oat straw, with the addition of 14 lbs. per day of ground Maize, split Beans, and bran in equal proportions, and they work and do well on it. It is well to allow linseed cake water to horses when living on this food. Straw may enter largely into the food of milch cows, but it must be Oat straw. Barley straw is of too drying a nature, and Wheat straw should not be used except in small quantities with other food.

Work on the Home Farm.

Progress with harvest work has been much interfered with by thunderstorms, and though there is little Corn left standing, not many new stacks are to be seen. Machines have worked without a hitch. Of course the crops were ideal ones to cut, nevertheless it is wonderful to see the improvement in self-binders. Some of it, however, may be due to a better understanding of their proper management. The rain will have done the Barley good, but there has been plenty for the purpose of mellowing it, and the last storm wetted the stacks nearly through, so we will hope now for finer weather and a quick gathering in.

This is the time we begin to hear of lamb troubles. We have been listening for signs of the storm, but all is quiet as yet. Much depends on the weather, for weaned lambs are very liable to take cold, and they always do best in a hot, dry time. A veterinary, who has been very successful in treating lambs, is of opinion that congestion of the lungs is their chief enemy, and that the presence of worms is often blamed for illness which is simply due to a violent chill. He maintains that few lambs are without parasites at this time of year, and advises the provision of better shelter from wet as well as more dry food.

The large Potato growers are too busy to market their stuff just now, and as a consequence markets are none too well supplied. The man who has a few second earlies left in the ground will be well advised to get them off at once. The cost of digging and picking may seem heavy at harvest wages, but he is sure of a fair market.

Eggs have kept at a low figure, still being fifteen for the shilling; but, on the contrary, butter is very scarce, and no wonder, when the cows only give half their usual supply of milk. The consumer has dear butter, and the farmer little to sell.

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Journal of Horticulture

THURSDAY, AUGUST 29, 1901.

Show Time.



What might be called the higher phase of horticulture it would be difficult to select any particular period as the show season, to the exclusion of others. The reason is obvious, for since so many flowers have been honoured with societies of their own, the season of shows extends over the greater part of the year. Then, again, we have the fortnightly meetings of the R.H.S., which are flower shows in themselves, minus the competition, but none the less interesting for that. Hardly has the winter changed into spring before the actual show season begins. First the Hyacinths, Tulips, and other spring flowers, and then, later, the Auriculas and English Tulips, till we come on to the battle of the Roses. With exhibitions of the queen of flowers still fresh in the memory, we find ourselves amongst shows of Carnations and Sweet Peas, with Dahlias later on, fruit at the Crystal Palace, and the all-powerful Chrysanthemums to carry us well into the winter. And, in addition to special shows, there are the grand mixed exhibitions, for which Yorks, Wolverhampton, Shrewsbury, Hanley, and other places are famous, coming at intervals through the summer season. In the face of such a round, who can say that exhibiting has lost its charm for horticulturists? for, on the other hand, it seems as though there is a growing desire to make public displays of the products of cultivation.

But amongst another, and a more humble, community of horticulturists there is a distinct show season, which opens towards the end of July, and continues through the following month. Have you never heard "our show" spoken of in the village in terms of endearment, as though it were a sacred institution, belonging exclusively to that little world? Have you never seen evidence of the preparation for "our show" that is made in many a lowly garden long months before the event, nor watched the careful attention paid to the crops

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

that are destined to grace the exhibition board? If not, you may be at a loss to realise the importance of "our show" in the eyes of the village gardener, but, if you are conversant with it all, there is hardly need for explanation.

In spite of the sad depopulation of rural districts and the migration to towns, there remains in most villages a community of gardeners. I use the term in a wide sense, because they may be tradesmen, or labourers, or engaged in any other occupation, but they are gardeners all the same, because Nature made them such, and the interest they take in the gentle art is of no superficial character. To these men the annual village show is the event of the year; by them or their ancestors it was instituted, through them it is supported, and but for them it would perhaps, like many other village customs, become a thing of the past. Of the future of village shows one can only surmise, but it is to be hoped that the interest displayed to-day by fathers will be inherited by the sons, and that the popular amusements of the age will not be the means of weaning away the taste for gardening. I am induced to express this wish by a knowledge of the fact that many village gardening societies are composed of middle-aged and even old men, and one would like to see more of the younger element enrolled in the membership.

To realise the importance of "our show" in the eyes of the village champion, who has a reputation to uphold, you should pay a visit to his garden some time before the great event takes place. Perhaps he has a dirty, well-thumbed copy of the schedule in his pocket, but more likely than not such a thing is altogether unnecessary, for if funds remain adequate, the schedule resembles the law of the Medes and Persians in the respect that it changeth not. The old exhibitor knows it off by heart, and he greets any new departure or addition with some suspicion, and is often content to let the prize go to some more enterprising competitor, for the first season at any rate. We may talk about the monotony of flower shows and the need of novelty, but the cottage gardener does not see it. He is content to leave things as they are, and sees no occasion for worrying about change.

But he is not averse to novelty in another respect. Tell him the name of some new variety of Pea, Potato, or what not, that is unknown in the district, and is a good exhibition sort. He will hand over the dirty schedule with a request that you will drop the name of the novelty and the vendor on the fly leaf, and feels happy in the knowledge that he has something to spring upon the public at the next show. The price may appear prohibitive, but by hook or by crook he will raise the needful for a small order, as was the case of the would-be prizewinner who saw an illustration of a new Pea in the catalogue of a well-known seedsman. He cut out the picture and despatched it to the tradesman with an order that, if the latter could guarantee the Peas to be equal to the illustration, he was to send on half a pint. I have seen many a wink displayed by an old exhibitor that would have done justice to Sam Weller, when he has pointed out some crop intended to come as an eye opener to the rest of the exhibitors on show day. The consciousness of the village champion is often amusing. He realises that he is a superior sort of person in his own particular line, but he modestly attempts to hide all that. If you praise his Onions he will give a knowing look that speaks volumes, or a sage remark to the effect that "they'll do," but behind it all there is an unexpressed meaning.

Years of experience have taught him to regulate his crops so that they will come in right for the great event, though weather sometimes upsets his calculation. You observe a Currant or Gooseberry bush closely netted or tied up with canvas, and you may assure yourself that the fruit on those particular specimens have a special office to fulfil. It is with a display of pride that the cottage gardener points to his Cherry tree, and informs you that for so many consecutive years the fruit from it has never failed to secure first prize at "our show." You note the appearance of a particular patch of Potatoes, where several varieties are represented, and learn that they are the "show taters," and have been given a little extra attention on that account. Variety is necessary in order to compete in the classes for the whites and coloured, the rounds and the kidneys. Of one or two sorts there are single rows, grown purposely for exhibition. Perhaps you wonder at this, and learn that it is "a good show tatur, but not much for eatin'." The village competitor knows that it is the finest-looking, and not necessarily the best Potato, that secures the prize, and he makes preparations accordingly.

Likewise there are single rows of Carrots, Parsnips, and Beet, looking as if a little special care has been devoted to their cultivation.

More likely than not each root had a special hole drilled for it, with a particular mixture of soil for its accommodation. The heads of one short row of Celery look rather peculiar in their brown paper collars, but that is only a "bit of early Salary" just for the show, and the brown paper is for the purpose of rendering assistance in the matter of bleaching. With the air of a man who is looking for something that he fully expects to find, the would-be competitor rummages amongst the leaves of his Vegetable Marrow plants till he finds a couple of infants that he thinks will make a nice pair for the show. He has his eye on a couple of others, but he doubts they will be rather too old. It is sometimes a source of trouble to keep things back for the eventful day, as well as to push them forward, as you may tell by the heads of Cauliflower carefully covered with leaves, and the Cabbages tied up to prevent the heads from bursting open. Of his labour the man takes no account, and seems to take a little pride in telling you how many times he has sown Turnips, and how often "that dratted flea" has had them.

And the arranging, the scheming, the labour, and forethought culminate on show day, when the marquee is erected once more in the old spot, and one champion again crosses swords with another in friendly rivalry. The day is very young when our competitor begins operations, and in the work of preparation and staging he is not a man to be trifled with; in fact, it is one of the serious events of his life, and he can brook no interference. His normal condition returns to him when the contest is over, and after he has had a run round, just to see whether the judges have done the right thing. If satisfied on this score, there is not a happier man in the field than he; but it must be said that in the eyes of the village competitor a flower show judge is by no means an infallible being, and when the latter does not give satisfaction the friends of the former know all about it.

And this is the horticultural event of the year—"our show," as the villagers call it, so that from this point of view I may not be far wrong in picking out the particular season and calling it show time.—H.

Drying Fruits.

YEARLY now, the question crops up whether or not we can successfully dry our Plums and other fruit, yet never a thorough satisfying answer is evolved. Some say our Plums are too thin-skinned to stand the evaporating processes; others count the cost of drying by machinery as too high to show a profit. But that we have not seriously enough considered the matter or made great enough endeavours, would seem to be the more feasible fact. The "Daily Chronicle" in a recent article in its pages referred to Plums as now usurping that place on the market which has been left vacant by the small fruits of last month. "Their very prodigality in all varieties from the humble Sloe and Bullace up through the gradation of Green Gage, Damson, and Prune, evokes the question," continues the "Daily Chronicle," "why another industry is not added to our villages—that of drying and preserving fruit on the French plan." A representative of the paper we have named put this question lately to one of the leading wholesale fruit merchants of Covent Garden. His reply was that though many people regard such an industry as impracticable, because of the insufficiency and uncertainty of sun in our climate, he was now embarking, together with two other men, upon a new patent evaporator, from which they hoped great things. He knew that similar experiments had been made before; for instance, there is an evaporator at Swanley Horticultural College, regarded as too costly to work when competing against the sun which shines more abundantly in France and California; and another at Chiswick, disused for the same reason. Nevertheless, as they aimed only at preserving the best fruit on the plan of the Carlsbad Plum, and as the machine would stone the fruit, hitherto mostly done by hand, he had little doubt from his own experience that a financial success awaited their efforts. For the present, however, the name and details must be kept a secret.

In this connection it is interesting to notice the immense strides being made in the cultivation and curing of Prunes in California. From a "Prune Primer" we learn that there are now 62,000 acres of Prune trees in California. Last year they bore nearly 350,000,000 lbs. of green Prunes, some trees having 800 lbs. apiece. Each acre has usually one hundred trees. The 150,000,000 lbs. of cured Prunes grown last year would fill 6000 freight cars, making a train forty-five miles long. They get ripe mostly in August, and are then picked and graded according to size. After being dried in the sun four or five days it is found that 2½ lbs. of the ordinary fruit has been reduced to about 1 lb. of cured Prunes. But even if England should find it discouraging, if not impossible, to compete with California in regard to the curing of Plums, there is no reason why further effort should not be made to improve our native Blackberry, which gives a character all its own to our hedgerows. As it is, an American variety of Blackberry is steadily winning its way into favour for lusciousness, and has fetched during the last few years about 8d. per lb.



The Week's Cultural Notes.

Often at this time of year the sphagnum on the blocks whereon are growing such species as *Ionopsis paniculata*, *Oncidium Kramerianum* and *Jonesianum*, *Zygopetalum maxillare*, and others of a similar habit, will be getting very long and green, and consequently will hold a great deal of water in suspension. In some cases it will be necessary to trim this back a little, but as long as the hot weather lasts it may remain. It is when dull skies and rain are prevalent that it is apt to do harm; as it is, the moisture around the forming bulbs is refreshing and beneficial. Only be on guard, as it is too late to rectify the mischief when the bulbs begin to decay.

Thunias, *Anguloas*, *Dendrobiums*, and similar plants, that have been placed in the open air to ripen, should now be covered at night. On several occasions recently the temperature has been dangerously



ODONTOGLOSSUM LEEANUM.

near to freezing, if, indeed, it has not touched the point, and although even a degree or two of frost may not harm them, the plants are better without it. Just a thin covering of tiffany, garden net, or some similar material will do, as if frost should come it only lasts a very short time at this season, and the least protection is sufficient.

Stanhopeas are often neglected at this time of year. There are other plants that are growing in the same house; these have perhaps finished their bulbs, and are ripening, the atmosphere being in consequence kept in a drier state. Little thought is given to the *Stanhopeas*, hung up under the roof in the hottest part, consequently red spider and other insects make headway. The syringe should be well plied about the foliage several times daily, and the roots kept moist, then all will be well. Another plant often mismanaged in this way is the lovely *Dendrobium infundibulum* and its variety *Jamesianum*. A cool and moist atmosphere is what these delight in, and only under these conditions will they be satisfactory.

Where seedling raising is carried on the small plants must be examined and all that need it repotted, as this operation will not much longer be safe for this season. The peat and moss for these should be finely chopped, and crock dust well washed, with the finest particles removed by sifting, added. It is best not to handle the compost for these delicate tiny plants much, and instead of using the fingers to press it into position have a blunt dibber; firm it as well as possible, and trim off all ragged ends with a pair of scissors. Water moderately after repotting until the tiny roots are seen to be again progressing.

Odontoglossum Leeaenum.

Though this fine species was honoured by certificates for the first time in the year 1882, there is no doubt but that more recent introductions in the same genus have surpassed it both in size and beauty; yet wherever we find it, *Odontoglossum Leeaenum* is sure to be held in respect by the grower, first for its usefulness, and also for its own showiness. From its having passed into the hands of a private cultivator early after its introduction, it remained for a considerable time almost unknown. It is now offered by the St. Albans firm, however. Messrs. Veitch were the introducers. The markings of the flower are suggestive of *O. excellens*, now well known. The sepals and petals are bright pale yellow, with numerous small rich chocolate spots. The flowers are borne on short racemes, the habit of the plant being very neat and compact.

Masdevallia nycterina.

The *Chimæra* section of *Masdevallia* has always been a favourite one with growers, the flowers being singularly quaint and beautiful. *M. nycterina* is no exception to the rule, and if grown in some receptacle that may be suspended above the line of vision, it is sure to attract attention. The flowers appear on short decumbent spikes, and



the prevailing tints of colour on the triangular segments are a dusky purple red and light yellow. The sepals are often spotted with black, and bear a number of short bristly white hairs. The culture of *M. nycterina*, and others of this group, differs rather from that of the showy flowered section. In the first place, they will not stand with impunity the same cold in winter that *M. Harryana* and *M. amabilis* enjoy. During the summer months they can hardly be kept too cool, but in late summer they should be placed in a house the temperature of which never falls below 50°, excepting in the very coldest weather, when a slight drop is preferable to pushing the fire heat unduly. As many of the spikes push downwards the plants are safest when grown in baskets, these being two-thirds filled with drainage, the remaining third with equal parts of peat and sphagnum moss.

Masdevallia muscosa.

This plant is very pretty and interesting, but as a garden Orchid not comparable with some others. The flower stems are covered with small white hairs, that seem to be a protection of Nature against crawling insects. The sepals and petals are of the ordinary character, but the lip has the singular property of closing up as it is touched, a characteristic not observed in any other *Masdevallia*. Doubtless this has something to do with the fertilisation of the flowers; possibly winged insects alight on it, and in endeavouring to release themselves take away the pollen. It is a native of New Grenada, thriving well in the cool house.—H. R. R.

[By Telegraph.]

Great Show at Glasgow.

August 28th and 29th.

THE great show of the Glasgow and West of Scotland Horticultural Society is being held in connection with the Glasgow International Exhibition (at which there has been 6½ million visitors since May) as we go to press. The show will be continued to-day, Thursday, August 29th. The committee naturally expected a good show on this occasion, and the entries have even exceeded their expectations, as, in addition to the marquees that were arranged for, they had at the last moment to requisition a pavilion connected with the International Exhibition for surplus exhibits. There are four large marquees, one, devoted to trade exhibits, 170 feet by 40 feet; another 230 feet by 50 feet, a third 120 feet by 40 feet, and a smaller one about 100 feet by 40 feet. Of tabling for flowers and plants some 12,000 square feet has been erected. The number of entries is nearly five hundred, all, of course, for pot plants and cut flowers, and the other show that will be held a week later is devoted to fruit and vegetables exclusively.

Among those trade exhibitors earliest forward were Messrs. Hugh Low & Co. of Clapton, who staged a nice group of plants, mainly Crotons, beautifully coloured. Mr. James H. Veitch at the same time was early superintending the arrangement of a group of stove and greenhouse plants to occupy some 400 square feet of ground space. Some of the more tender subjects had unfortunately suffered somewhat on the road, but some nicely coloured Crotons happily had taken no harm. Even more badly damaged than the Chelsea plants were some individuals in a grand lot of double and single Begonias from Messrs. Ware & Co., Feltham, many of the best flowers having dropped on the journey, as may well be imagined, much to the chagrin of Mr. Pope, the grower, who was very down-hearted over the matter.

A specially interesting group of cut Lilies from Messrs. Wallace and Co., Colchester, are arranged, and in addition to these a grand lot of Gladioli in various sections, with Montbretias, Tritonias, and other flowers of autumn, are set up in the trade tent.

Of Ferns, a remarkably fine group comes from Messrs. Hill & Sons, Lower Edmonton, London, while Messrs. Austin & McAslan, Glasgow, had forward a lot of early Chrysanthemums and other plants.

In the tents devoted to subjects for competition, the four competitors who had entered for the chief prize of £20 for a miscellaneous group of plants, 30 feet by 10 feet, were very early at work. The competitors are two nurserymen, respectively Messrs. R. B. Laird & Son, Edinburgh, whose manager, Mr. White, is so well known for his taste in plant arrangement, and Mr. Hugh Dickson, Belfast, and two gardeners, the one Mr. Gault of Murcie House, Pollokshaws, and the other Mr. Boucher, Aitkenhead, Glasgow. There is a keen competition for the Messrs. Mackenzie & Moncur's prize for floral designs, and also for six bouquets and six baskets of cut flowers. In the open classes for herbaceous cut flowers such well-known giants as Messrs. Harkness & Sons, Bedale, Messrs. Cocker & Sons, Aberdeen, and Messrs. Kerr Bros., Dumfries, are all competing.

The weather at Glasgow is known, unfortunately, most generally for its "dreeping" character, but to-day the skies have forgot to assume any appearance of dulness, and a brisk breeze promises for a good day to-morrow.

In passing we may state that the very liberal prizes offered have induced a large number of growers to enter the fruit and vegetable show on September 4th and 5th, an average of twelve to each class having been received; in the two chief collections of vegetables as many as seventeen entries having been received in each case. It is expected that the majority of gardeners will time their visit to the "International" to see this grand fruit show, when there is every appearance of there being a gratifying display to meet them.

The show opened under most auspicious weather conditions, and is of the most charming nature, while the display of plants, particularly in the groups, is magnificent. Cut flowers are all a grand show, as they always are at Glasgow, and altogether, taking everything into consideration, no finer exhibition of plants and flowers has ever been held in Scotland.

It is unfortunate that no arrangement for lighting the marquees at night has been made, this keeping thousands of Glasgow citizens from seeing this grand exhibition of gardeners' skill and taste. As already noted, the chief prize in the plant classes is for a group arranged for effect, 36 feet by 10 feet. The *tout ensemble* of the four groups when ready for the judges is extremely grand, the first prize being finally awarded to the arrangement by Mr. Gault, Murcie House, Pollokshaws, for a remarkably bright composition in which splendidly coloured Crotons play a prominent part. The back of the group is formed of an artistic wall of cork clothed with suitable plants. Mr. Hugh Dickson, Belfast, is a very close second, the main points in this arrangement being bold groups of handsome double Begonias, Caladiums, Liliums, and Ferns. Messrs. R. B. Laird & Sons, Edinburgh, were third with a graceful composition, and Mr. Boucher fourth.

Only two competitors staged for the group of plants in a circular space 10 feet in diameter, for which £5 and the Veitch Memorial medal is presented. Mr. Hall, gardener to W. Campbell, Esq., William

Wood, Kennis Head, being first; and Mr. Knight, gardener to Peter Wordie, Esq., Millerneak, Lenzie, second. Crotons play a prominent part in both arrangements. Only three entries were made in the class for twelve stove or greenhouse plants, not less than eight in bloom, the first prize amounting to £15. The material in each case was greatly inferior, and not by any means worth the handsome prizes offered. The judges recommended £3 for the first, Mr. Jack, gardener to W. Connell, Esq., Rozelle, being the exhibitor. The other plants included some good Crotons, a few Orchids, a lot of Ferns and Liliums, with softwooded plants.

Cut Flowers.

The chief prizes in this section are offered for the best and greatest variety of flower designs, baskets and bouquets excluded. Here Messrs. Perkins & Sons, Coventry, secured first with some charming productions, notably a harp of Lilies, mainly a cushion of pink Carnations and a cross of purple Asters. Messrs. Harley & Sons, Glasgow, were a good second, and the third lot had no tickets attached.

The next class for six bouquets and six baskets of cut flowers. As a whole these were not so good as the previous class, the first prize being awarded to an exhibit at which no ticket had been placed; the second going to Messrs. Jones & Sons, Shrewsbury, the baskets here are particularly artistic and good; third, Mr. Gault.

Gladioli are grand, the prize for forty-eight spikes being secured by Mr. Mair, Prestwick, with heavy and generally good examples. Messrs. Harkness & Sons, Bedale, made a good second. The class for twenty-four spikes was less excellent, Mr. Carnegie, gardener to M. Smith, Esq., Prestwick, securing first with fairly good examples.

A most important class is that for Roses, to occupy space 8 feet by 6 feet, and there are six collections staged, one or two being very effectively arranged, but the decidedly superior blooms set up by Messrs. Cocker & Sons, Aberdeen, without doubt deservedly win the premier prize. For the season the buds, respectively, of Caroline Testout, Captain Hayward, and La France, to mention no others, were very fine indeed. Messrs. D. & W. Croll, Dundee, are a very close second, many blooms being equally fine with the former, and the arrangement in general is more effective. Mr. H. Dickson of Belfast forms a splendid third with a very pretty group, but the buds are much smaller than the Scottish Roses.

For forty-eight cut Roses, H.P. and H.T., there is a strong competition among English, Irish, and Scottish growers. The blooms on the whole are remarkably fresh and well coloured, but naturally deficient in size. Eventually the first prize was awarded to Messrs. D. & W. Croll, Dundee; Messrs. Dickson, Newtownards, being second. The class for twenty-four blooms of Tea or Noisette Roses is rather poorly represented, Mr. Adam, Fernielea, Aberdeen, being first here, and Mr. Geo. Prince, Longworth, Faringdon, Berks, second.

Dahlias formed a very grand and effective display, there being no less than eight competitors in the class for a collection to occupy 10 feet by 6 feet. Here Messrs. M. Campbell & Sons, Auchinraith, High Blantyre, N.B., secured a well-merited first with an effectively arranged lot composed of Pompon sorts in great variety, and the best of the Cactus section. All were blooms of exhibition quality, and equally fine blooms of Show and Fancy varieties. Mr. Mortimer, Farnham, Surrey, is a very good second, but with blooms less heavy, though clean, and of finer quality. Messrs. Alex. Lister & Sons, Rothesay, were third. For forty-eight blooms Mr. Mortimer was first with fresh, though somewhat light examples; Mr. Smellie, Busby, second with very much larger but less even blooms.

The class for forty-eight blooms, Cactus varieties, brought out a very strong competition, the blooms in general being of high-class quality. Here the first card goes to Mr. Smellie of Busby; the second to Messrs. Lister & Sons, and Mr. Gold, Wishaw, third.

In the class for a collection of Carnations to occupy space 8 feet by 6 feet, Messrs. Campbell & Sons, High Blantyre, repeat their Shrewsbury victory, gaining first with an arrangement in general much like that set up by them on the former occasion. The yellow ground Picotees are deserving of all praise, Mr. Whitehead, Selkirk, being second; and Mr. Freeland, Larkhall, third. For a collection of Sweet Peas, space 10 feet by 6 feet, Mr. C. Muir, gardener to H. Strong, Esq., Westwood, Busby, secured first with a fair lot, the second prize going to Messrs. Jones & Sons, Shrewsbury. The blooms in this lot are very badly set up.

With a grand lot of flowers in season Messrs. Cocker & Sons, Aberdeen, secure the leading award for twenty-four bunches of hardy herbaceous flowers; Mr. Young, gardener to Mrs. Fleming, Hamilton, Craiglaw, being a creditable second; and Mr. Storrie of Lenzie third. The finest lot of these flowers was, however, the first prize dozen from Mr. Brydon of Innerleithen. This was one of the finest lots, comparatively, in the show; spikes of *Eucomis regia*, *Echinops sphærocephalis*, and *Lathyrus splendens alba* were particularly fine.

The collection of border plants, 15 feet by 6, brings out four competitors, a keen struggle for first place taking place between Messrs. Harkness & Sons, Bedale, and Messrs. Cocker & Sons, the former eventually securing the coveted position. Their group is characterised by much brightness, due largely to the Gladioli introduced with much profusion. Messrs. Cocker have a greater variety of material charmingly displayed, and with another set of adjudicators might well have occupied

a higher position. Mr. M. Cuthbertson, Rothesay, follows as a good third, and no less than twelve new varieties of Cactus Dahlias appear in this lot. Among a variety of other cut flowers mention may be made of the fine Pentstemons, the pretty Pansies, Marigolds, and Phloxes.

Miscellaneous Groups.

Mr. Eckford, Wem, shows a collection of fine Sweet Peas, though among these no new forms were seen. From Mr. Amos Perry, Winchmore Hill, London, a large and interesting collection of hardy flowers are forward, including thirty-two varieties of Nymphæas, arranged in pans of water; the rare Aster Thomsoni was also represented.

Mr. Charles Irvine, Jedburgh, was represented by a large and fine collection of new French Phloxes and Pentstemons.

Mr. John Forbes, Hawick, had also a lot of Phloxes and Pentstemons with a grand lot of single blooms of Carnations in bewildering variety, also a few examples of Begonia Caledonia, in a small exhibit.

From Messrs. Laing & Mather, Kelso, a bunch of their new Carnation Sir R. Waldie-Griffith was conspicuous. Lord Hamilton of Dalzell, Hamilton, has forward a small group of dwarfed Japanese Conifers and Acers.

Messrs. Dobbie & Co., Rothesay, have one of their finely arranged groups of cut flowers, consisting mainly of Cactus Dahlias, in great variety, with Pompons and Show sorts more sparingly introduced.

Here, also, are a grand lot of Dahlias from "Hobbies," Ltd. (Mr. J. Green), most prettily arranged with Maidenhair Ferns and Asparagus in pots.

Messrs. Lister & Sons, Rothesay, have a very extensive collection of cut flowers representing the various subjects for which they are known. Fancy Pansies are here very fine; large and bright Sweet Peas, Violas, and Dahlias are also well shown.

Messrs. Smith & Simons were represented by a large group, mainly of large Palms and other subjects useful for decorating apartments.

Since first wiring, Messrs. Veitch & Sons, of Chelsea, have arranged their group, which occupies one end of the large marquee, and formed one of the most attractive groups in the whole show.

At the time of sending off our telegram no awards had been made to any of the trade exhibits.

Storing Fruit.

(Concluded from page 172.)

No one who has visited a fruit room in September, when there is a quantity of fruit all ripening into that mellow condition which betokens perfection, but must have been struck by the odour which is emitted from them. This odour, it is needless to say, must be as hurtful to the well-keeping of fruits as anything can be—say, for instance, a quantity of Williams' Bon Chrétien Pear all ripening at once into the condition fit for table, and in a day or two all will be in a stage beyond this, and become a mass of juice which it is difficult to handle without bursting them. Now, I always look on a mass of this kind as the most dangerous to a fruit room; and as all early fruits ripen in warmer weather than other kinds do, they ought to be furnished with a degree of ventilation almost amounting to complete exposure, in order that the odour emitted by ripening fruit, which very quickly takes a decaying turn, may not contaminate the rest. Fruit at that time ought also to be kept thin. But to return to the Ribston Pippin. It often happens that these have to be gathered when the fruit room is more or less occupied by fruits in the condition spoken of, and if the weather be warm at the time the fruit is impelled onward to a condition fit for table much earlier than they otherwise would be if kept cooler; and what is, perhaps, as bad, the infectious character of the atmosphere they are in hastens on decay some time before ripeness or mellowness has done its part, hence fruits that ought to be in perfection in January are ready by the end of November, not Ribston Pippin Apples only, but all other kinds of fruits as well. This is one of the reasons why fruits in certain seasons keep longer and better than they do in others—the simple fact they are not ready to gather until cold weather insures their keeping, as more fruit generally perishes in November than in December and January, and no amount of mere cleanliness and care of removing diseased fruit can compensate for the crowded condition of the fruit room in the early autumn months, when the weather at the same time is of a kind that favours "forcing," which it certainly does when it is warm at the periods spoken of.

Now, as the Ribston Pippin cannot be preserved under circumstances as described, let us suppose an opposite case, when there was no lack of fruits generally; the fine autumn of the year before securing sufficient bloom, but the multitude of fruits only resulted in each being very small, and the unfavourable season did not mature them with that degree of perfection so requisite in good fruit, hence we had a quantity of half-perfected fruits, presenting little but a thick tough

skin, and a core quite as large as usual. Some of these fruits possibly might keep longer than was ever known before; as they contained so little saccharine matter there was scarcely anything within them to engender decay, hence a sort of withering or shrivelling-up instead of the usual spot and rot which consume the better class of fruits.

From the above it will be seen that warmth favours decay by forwarding the fruits, and thereby hastening on the period of their existence; so in like manner cold encourages preservation by retarding the natural ripening of the fruit, and when it has approached that condition it tends to keep it from advancing further. But this unnatural state of things has its disadvantages. Fruits so treated are never good. Pears may be kept in an ice-house to a period much beyond that of their usual keeping time, but the flavour is gone. The same may be said of summer fruits, as Strawberries, Peaches, and the like, which have been so tried frequently. We may therefore learn from this that Nature cannot be so far outraged as is here shown with impunity. There exists a proper time for such fruits to be had in perfection, and to retard them much beyond it only produces an article much diminished in its most important qualities. From this we therefore learn that an ice-house is not a suitable place to preserve fruit intended for table, although it may become a very good medium to preserve some that it may be desirable to keep, from motives of curiosity, for as lengthened a period as possible. Some other conditions are also necessary to the well-keeping of fruit, as will be shown.

Whenever a quantity of fruit is piled up in a heap, it begins what in common language is called "to sweat." This sweating brings out an oily substance to the outside. Sweating will also occur without the fruit being so closely piled up as spoken of, but it is more slow; and if it be thinly on a shelf it is in its most legitimate way. This sweating coats the skin with a sort of varnish, which resists the action of the atmosphere, and certainly promotes the keeping qualities of the fruit. This varnish ought not to be removed by any means, handling being one of the certain ways to do so. Let the fruit, therefore, be placed at first singly on the shelves, and little else will be wanted but looking over them and picking out decayed ones; and the place being kept cool and well ventilated, there is a tolerable certainty of their keeping well, other things also being favourable.

Some useful fruit rooms that I have seen are lean-to against the north wall of a garden, the great defect in these being the want of ventilation which, in part at least, ought to be at top, and is rarely thought of in a lean-to shed. The sides being low, the exhalation from fruit cannot well be all carried off from them; it is better, therefore, to leave an opening at top to allow it to escape, otherwise the fact of being behind a wall is an advantage rather than otherwise, and more so if it be isolated, and not form part of a series of buildings, as by that means end ventilation could be more easily accomplished. I have also seen a very useful fruit room half underground; but this is only advisable on a dry, gravelly, or sandy soil. I have also seen one under the shade of a tree, not in a dense wood (which is bad), and it answered very well. The main thing to stipulate for is plenty of space and ventilation, and to use the latter on all occasions, except, perhaps, in damp, warm weather, and the probability is that fruit will keep as long as it is required to do. A Kentish farmer stores his Apples away in the oast kiln, than which nothing can be more airy; and although the large quantity they often have compels them to lay them thicker than they otherwise would, they often contrive to keep Nonpareil and Golden Knob Apples in a good condition till March, and French Crabs still longer.—R.

Preserving the Form and Colour of Flowers.—From a French botanical journal we extract several recipes for preserving the form and colour of flowers. One method is to immerse the stem of the fresh specimen in a solution of 31 parts by weight of alum, 4 of nitre, and 186 of water, for two or three days until the liquid is thoroughly absorbed, and then to press in the ordinary way, except that dry sand is sifted over the specimen, and the packet submitted to the action of gentle heat for twenty-four hours. Another method is to make a varnish composed of 20 parts of powdered copal and 500 parts of ether, powdered glass or sand being used to make the copal dissolve more readily. Into this solution the plants are carefully dipped; then they are allowed to dry for ten minutes, and the same process is repeated four or five times in succession. Plants may also be plunged in a boiling solution of one part of salicylic acid and 600 of alcohol, and then dried in bibulous paper. But this act should be very rapidly done, violet flowers especially being decolourised by more than an instantaneous immersion. Red flowers, which have changed to a purplish tint in drying, may have their colour restored by laying them on a piece of paper moistened with dilute nitric acid (one part to ten or twelve parts of water), and then submitting them to a moderate pressure for a few seconds. But this solution should never be allowed to touch the green leaves, as they would be decolourised by it.



Selecting Buds and Feeding.

The plants are now showing flower buds freely, and many varieties have already had buds taken according to the term commonly in vogue, though a better way is to speak of them as retained or secured. At this juncture of their growth plants show a bud at the termination of a growth. At the same time, from the joints below this bud, wood growths also spring, and if not rubbed out soon extend strongly into growth, and prevent the flower bud above them from swelling, by depriving it of support. The wood growths in question, if allowed to extend, produce in the majority of cases terminal buds, that is flower buds surrounded by other flower buds of smaller size. These terminal buds do not usually give the finest flowers, but they do produce good useful decorative blooms if the small buds are rubbed out. Single buds, or what are termed crown buds, are produced on the majority of plants from the middle of August to the middle of September, and it is these buds which usually give the best blooms of the largest size. Earlier in the season, however, the plants have produced a similar bud, which is termed the "first crown" bud, if the plants make a natural break, that is break into wood growth without being obliged to do so by previously pinching out the point. The next bud is termed the "second crown," and as this appears about this date it is generally considered the best, when the finest flowers are desired. There are exceptions, and it may be found in some cases that a third crown bud will do, where the variety produces such a bud. W. H. Lincoln is one of this class. Some varieties are naturally late in producing second crown buds, hence there has arisen the practice of stopping the plants to induce them to make their several breaks earlier. When this system of stopping is carried out in April or May the plants are prevented forming the first crown bud, but growths are produced which are tantamount to those which would have formed had the plants been allowed to do so naturally. Limit the growths to three of the best for each plant, and encourage them to extend until they show a bud. Whether this is a crown or a terminal bud it may be secured, all growths or buds around or below it being suppressed.

Terminal buds do not as a rule appear until the middle or end of September, in some cases later. Extra support and feeding may be given the plants from the time the buds appear. The most common way of affording extra food to the plants is by weak solutions of natural and artificial manures. Another good method is to supply the roots with a slight top-dressing of some rich material, but a top-dressing is only required by well rooted plants. There should also be room on the surface to receive this additional layer, which need not, however, be more than a quarter of an inch thick. To four parts of chopped turfy loam add one part of half-decayed fowl manure or a similar quantity of sheep dung. Press it gently on the surface, and give water only with a fine rose, which will settle the soil and carry the enriching properties carefully down to the roots. At frequent intervals afterwards, when roots have taken possession of the top-dressing, sprinkle on dustings of Clay's, Standen's, or some special Chrysanthemum manure. It is not necessary to stick to one particular kind, as the Chrysanthemum appreciates variety. Applications of weak and clear soot water once or twice a week may always be given with advantage, but no manure or fertiliser should be given to any plants where the pots are not full of roots. If space permits, another top-dressing of soil and manure may be given at the end of month. Avoid giving stimulants when the plants are dry. They should have clear water given first.

Mildew appearing on the lower leaves may be checked by a liberal dusting of sulphur. Wage war on the troublesome earwig, which attacks the points of shoots and spoils buds. Aphis may be kept in check by using tobacco powder.—E. D. S.

Bigeneric Hybrids.—A contemporary is responsible for the information that, "a brand new flower has been obtained by a Chicago florist. Mr. Evan Morton of Mayfair has grown a beautiful flower, which he has named the Centura. A score of plants of it are now growing in his garden. It was obtained by crossing the Scotch Thistle with the Carnation (*sic*), and it partakes of the nature of both parent stocks." Americanism surely! No doubt our readers would like to see the wonderful hybrid.

Cyrilla racemiflora.

THE accompanying illustration shows the character of a newly certificated evergreen shrub, introduced by Messrs. J. Veitch and Sons, Ltd., to whom the award of merit was given at the Royal Horticultural Society's Drill Hall meeting on August 13th. This attractive shrub is found in the West Indies and Brazil, and extends northwards to the Southern United States. We term it a novelty, yet it is said to have been introduced into this country in 1765, probably by Sir Joseph Banks, who travelled in those quarters of the globe to which we have referred.

Coming from these sub-tropic regions, it is necessary to cultivate this shrub under glass, at least during winter, though an ordinary warm greenhouse should suit its climatic necessities. The growth is slender, and for the character of its leaves and inflorescence attention may be directed to the illustration. The flowers are white, and produced from that point of growth where the new wood starts from that of the year before. As a rule, 6 feet is the maximum height of the plant.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

Ryecroft, Lewisham.

The stock of Chrysanthemums at the Ryecroft Nurseries, Lewisham, seems even sturdier and stronger than they have been in previous years at this period. Their numbers, in all sizes of pots, and for all manners of purposes to which the Chrysanthemum as a decorative plant is put, are very great, as hitherto; the plants, too, are free from disease, and unharmed by the dreaded black fly. Their robustness, and the careful attention they constantly receive, only insure their continued health and cleanliness.

Visitors to Mr. Jones' establishment will also discover splendid batches of all the finer Heliotropes. I believe the proprietor owns every improved variety of the Cherry Pie that is worth a place in gardens. Moreover, after having given a trial to all he can secure, and having weighed their merits within his mind, all that do not meet with full approval are cast aside, and he who purchases may rest assured that those Mr. Jones offers and speaks well of, really warrant the encomiums bestowed upon them. I would draw attention to the following varieties of Heliotropium amongst others. First, there is Circe, deeply tinted with red, for though it used to be that Heliotrope was heliotrope, yet just as we sometimes hit upon white blackbirds (!) and white Pinks (not to mention *yellow* Violets), so, in like manner, the red and white Heliotropiums are not uncommon; Circe, then, is one of the best of these. Following this comes Dr. Juelin, stout and very vigorous; Paul Rose, of purplish-violet tinge and whitish centre; White Lady has a large, loose white truss; Albert Delaux is also white, shading off to lavender-blue; Boneriana, a sturdy sort, has pale mauve flowers; Piccoli, with enormous truss of deep blue, is one of the finest in the collection; Chameleon, as the name suggests, is changeable in colour, but the prevailing shade is violet purple; Jeanne d'Arc furnishes another fair white, and Mina is rosy violet.

The Ryecroft strain of fimbriated single Petunias are splendid flowers for the cultivator who wishes showy subjects for conservatory employment. These I greatly admired, and not less so the double-flowered varieties, than which few plants with double blossoms are more pleasing to the eye. They must, however, be well grown, else the flowers are monsters of malformed growth. I will only mention three sorts, which are Albert Samain, coloured a distinct rose, shaded with mauve; Helio, heliotrope shade, slightly marked with white; and Romeo, a rich mauve variety, shaded with heliotrope. There are others of pure white, or shades of pink, rose, and crimson.

The houses of single and double Begonias deserve much more notice than can possibly be given now. The Picotee-edged singles are still being worked upon, as are the crested types, which, however, no one with an eye for real beauty will ever patronise. The habit of the single and double varieties, and the brilliancy of their flowers, are being constantly improved by the process of selection. Carnations out of doors were a sight "for sore eyes" about a month ago, and at Ryecroft, as elsewhere, the new varieties are well to the fore. The Cropper Tomato, of which all who have given it a trial speak in the highest praise, has again borne very heavy crops of beautiful marketable fruit. Begonias for winter flowering, including grand batches of Gloire de Lorraine and Caledonia, were thriving in fine style in low span-roofed pits. Calla Elliottiana was represented by numerous seedling plants of more than usual robustness. Some of the finest blooms of this variety that I have seen were produced in the Ryecroft houses this year. During the last two seasons Mr. Jones has added much more liberally to his collection of decorative stove, foliage, and flowering plants, and what are included are grown well. The seed and bulb departments of his business are also very successful, and during part of the past summer this Lewisham nurseryman has opened premises facing the High Street, where a large retail trade in cut flowers, Tomatoes, Cucumbers, and plants is transacted.—WANDERING WILLIE.

Wild Flowers of Old English Gardens.

SEVERAL of the Saxifrages (plants thus styled from their power of breaking or splitting stones in their upward movements) have long been garden favourites, and amongst our native species we must allot a place of honour to the pretty London Pride. Many a small garden plot in a dingy suburb has been enlivened by this flower, which blooms under circumstances very unfavourable. Who brought it first to London from Yorkshire or Ireland is not on record. Its Latin name of *Saxifraga umbrosa* tells us that the plant occurs in woods or shady places. It is rich also in other popular names besides that one connecting it with the British capital. "None So Pretty" is excessive praise indeed, but this is an old name; 'tis said that in the west of Ireland folks call it after St. Patrick. Bird's Eye is a name it shares with several flowers; Prince's Feather is another; Kiss Me Quick is a Devonshire one, and there are more. The white Meadow Saxifrage (*S. granulata*) has also been called the White Pride. It still occurs on gravelly soil about a few meadows near London, but was formerly commoner. [It is fairly common on the banks of the Thames between Richmond and Kew.] This is notably distinct from the Alpine kinds, and taller than the preceding species. The white flowers are large, and open in early summer; its stem is somewhat downy and viscid. A double variety has been cultivated many years, and proves a capital plant for borders, succeeding in any soil.

The Irish is the *S. Geum*, the kidney leaved species, or Round Pride. This was under cultivation in the reign of George III.; it much resembles the familiar species of London. A variety was brought from Kerry, which gardeners succeeded in multiplying; the petals are larger, and have crimson spots. Another variety, or subspecies, was got with a hairy panicle and leaves. It is a plant that may be recommended for the rougher parts of a rock garden, being usually increased by division. Very distinct and attractive is the yellow Marsh Saxifrage (*S. Hirculus*), an exceedingly rare native species, which has been in gardens a good while; possibly it was introduced from the continent. Its leaves are entire, mostly smooth or slightly hairy; the flowers rich yellow, having orange dots near the base of the petals. Bogs are its natural home, and in gardens it must have a moist situation. So must the allied *S. aizoides*, which is an evergreen shrub, of low growth, abundant beside rills of our northern hills. This expands its yellow flowers during the summer and autumn; they are in a panicle, which is frequently branched and many-flowered. Its leaves are

crowded near the root, smooth, or sometimes notched. Both these may be propagated by seed and division.

Our British purple Saxifrage, *S. oppositifolia*, which occurs on lofty hills, especially in Scotland, like several of its foreign relatives, differs rather in habit from most of the tribe, may have been introduced to gardens by Continental specimens. The stems are prostrate and densely leafy, but the large purplish flowers are erect, sometimes almost hiding the foliage during early spring. Varieties with pale pink and white flowers have been obtained, and another, having rosettes of erect leaves, also flowers three-quarters of an inch across, of several tints. On Alpine hills, near to the limits of perpetual snow, grows *S. biflora*, a still finer purple species, which we see in some rock gardens. Its flowers are in heads of two or three, turning from rose to a violet colour, the leaves being flat, and thinly scattered on the stem.

Another Saxifrage that occupies a distinct position is the mossy *S. hypnoides*, popularly called in some places Eve's Cushion. It forms tufts of deep green, spreads quickly, and grows anywhere, being rather variable. The names of *S. affinis*, *hirta*, and *platypetala*, and others, represent doubtful species, differing in stem, leaf, or flower. Usually, the rootstock throws out numerous decumbent shoots besides the tufts. Its stem has but few leaves, and bears a panicle of large greenish white flowers; sometimes these are bell-shaped, of starry form occasionally. North of England, the plant may be often seen growing wild on walls or roofs. Loudon records the fact that another Saxifrage of mossy growth, *S. muscoides*, was cultivated in Kew Gardens as far back as 1781. The plant is more mossy even than Eve's Cushion, the tufts being crowded and dense, of a deep green, the flower-stalks erect and viscid, having corymbs of yellow flowers. It seems to have been brought to London from Westmoreland mountains, occurring wild in a few rocky places. One of the



CYRILLA RACEMIFLORA.

Saxifrages that was common near London is the rue-leaved species, or Rue Pride, *S. tridactylites*. It is an annual, with small white flowers coming up singly, and a rather reddish, downy plant; it is sometimes seen upon garden walls. Amidst the rivulets of hills grows the starry species, *S. stellaria*, also called Hairy Pride, from its downy leaves and stems; it is a little like our London Pride, and will flourish at the edge of a pond. Moisture lovers, too, are Golden Saxifrages, the commoner of the two, *Chrysosplenium alternifolium*, has filled up damp patches of old-style gardens with its low clusters of yellow flowers.—J. R. S. C.

Old Vines.—The Hampton Court and Cumberland Lodge Vines are bearing well this year. Over 2000 bunches of the luscious Hamburg variety are rapidly ripening.

NOTES

NOTICES

Weather in London.—The atmosphere has been decidedly cooler during the last week, the evenings and mornings being particularly autumnal-like. On Monday last a thunderstorm, accompanied by a violent downpour of hail, added to the change and variety of the elements.

Inspection of Nursery Stock.—This power is now operated in Pennsylvania for insect pests. The law went into effect August 1st, and hereafter all nursery stock coming into the State will be required to have attached to it a certificate stating that it is free from San Jose scale or other injurious insect pest or pests.

Bees Swarming.—In one of the Folkestone fashionable thoroughfares last week, when business was at its full height, an immense swarm of bees swooped down and entered the premises of a leading tradesman. A lively scene followed, and while the customers scattered in all directions, the insects, doubtless attracted by the smell of some honey displayed amongst the wares, comfortably settled themselves in one of the windows of the establishment.

Presentation to Mr. Owen Thomas.—On Friday last a ceremony took place in the Library at Frogmore, being the presentation of an address to Mr. Owen Thomas (on his retirement from the position of superintendent of the King's gardens) from the whole of the employés of the Royal Gardens, Windsor, Hampton Court Palace Private Gardens, White Lodge, and the Grounds at the Royal Pavilion, Aldershot. The presentation was made by Mr. Edwards, who, in a few introductory remarks, explained to Mr. Thomas the reason for asking him to meet them. Mr. Edwards then read the following address:—

TO OWEN THOMAS, ESQ., V.M.H., & C.

We, the staff, young gardeners, and employés of the Royal Gardens, Windsor, have learned with deep regret that you are retiring from the position you have so ably filled for the last ten years as superintendent of the Royal Gardens. It has been the privilege of most of us to have worked under your direction the whole of that time, and we desire to place on record our grateful acknowledgment of the courtesy and kindness we have invariably received from you; also to bear testimony to the earnest and energetic manner in which you have carried out the responsible duties of your office, which has been an example to all. We ask your acceptance of this address as a slight token of our esteem and regard, and pray that Almighty God will bless you with health, happiness, and prosperity for very many years. Signed on behalf of 130 subscribers, Thos. Edwards, chairman; J. Dunn, treasurer; E. Harris, secretary; W. Barker, James Brown, J. Chennell, J. Green, G. Hampton, J. Jack, J. S. Lindsay. —29th June, 1901.

Mr. Thomas, who was much touched, in reply, said: Mr. Edwards and Gentlemen,—You will understand that this is a trying time for me. I feel I cannot at the present moment adequately express my thanks, or how much I appreciate your great kindness. I can only say I thank you most heartily; but although it is a painful matter to say good-bye to you who have worked so willingly with me, I am glad in one respect to meet you, as this occasion gives me an opportunity of stating—what I often felt—that no man in the position I have held could have had more loyal support and assistance from the staff than I have experienced, from the time I came to Windsor up to the present; and I sincerely trust that the same good feeling will exist in the future with my successor. Having made some touching allusions to the late Queen Victoria, he asked each member of the committee to accept framed cabinet photos (signed) of Mrs. Thomas and himself, and again thanked one and all for their kindness.

The address, which is on vellum and enclosed in an oak and gold frame, is a superb example of the illuminator's art. For beauty of design and harmonious treatment of colour it is deserving of the greatest praise. At the heading is the royal arms in heraldic colouring upon a delicate floral ground, with the words Royal Gardens, Windsor, in ribbon. The name, Owen Thomas, Esq., with its beautiful capital letters, and inside letters, Forget-me-nots, delicately treated on gold ground, is very fine. The border is in the English flower pattern with Ivy leaf ornament in early 15th century style, on a ground of endless filigree work. At the bottom are two finely executed views of Mr. Thomas's residence (south and north). The wording is in Saxon, and signed by the chairman and committee. The work is designed and executed by Mr. W. S. Darby of Windsor, and has given the greatest satisfaction.

Accident to Mr. B. Ladhams.—Mr. B. Ladhams of the Shirley Nurseries, Sonthampton, met with an accident on the day of the Shirley Flower Show, on August 21st. As he was entering the show ground his horse bolted with a van-load of plants and flowers, and, colliding with a tree, turned the van over on the top of him. Happily his injuries were not very serious, and the readers of this paper will be glad to learn that he is able to get about again. He was heartily congratulated on his marvellous escape.

Flowers in Season.—Frequenters of the Royal Horticultural Society's shows in the Drill Hall know well the handsome and imposing displays of new and superior varieties of Gladioli which the Langport firm set up about this season of the year. We are reminded once again to be watchful for another display from Messrs. Kelway at a near date by the present of a box of specimen blooms of Gladioli. They were all magnificent, both in the variations and distinctness of the colours, the form, size, and substance of the blooms, and the length and breadth of the spikes. The following are the varieties:—Laco, scarlet crimson; Galatea, orange scarlet; Countess Amy, pale mauve, deeper at the edges, and with a creamy white throat; Miss Foster, white, faintly suffused and splashed with mauve; Mrs. Wood, deep, rich mauve; Grover Cleveland, rich glowing crimson with white throat; Wellington, a very rich and deep crimson, with others.

A New Apple Barrel.—According to the "Fruit Trade Journal," a new Apple barrel—an inspection barrel it is called—is being introduced on the Chicago market. It is described as follows:—Six inches from the end of a stave is sawed crosswise $1\frac{1}{2}$ inch on a bevel, and then sawed lengthwise $14\frac{1}{8}$ inches, giving an integral tongue, still attached to the stave and easily sprung outward. These staves are from $3\frac{1}{2}$ to 4 inches wide, and $28\frac{1}{2}$ inches long. Four of these staves are put into a barrel (on opposite sides of the barrel), so that two of the tongues open from end of the barrel and two from the other; and, by raising the middle hoops and springing out the tongues, a view of the fruit is to be had every quarter of the distance around the barrel nearly its entire length, a fact which the patentees claim would completely discourage the deceptive packer in trying to mix poor fruit with the good, as there is no room for the poor fruit, which fact is sufficient guarantee that fruit packed in these barrels will be true to mark and of the grade represented.

National Chrysanthemum Society.—The first meeting of the executive committee held after the recess took place at Carr's Restaurant, Strand, on the 26th inst., there being a good attendance of members and delegates from affiliated societies. Mr. Thos. Bevan was in the chair. The illuminated address voted by the annual meeting to Mr. P. Waterer, the late chairman of the committee, was on view, it having been prepared by Mr. W. B. Pratt, of Newgate Street, E.C., and the execution was much admired. The address sets forth that it is "presented to Mr. P. Waterer in grateful recognition of his services to the society as vice-chairman of the executive committee in 1897-98, and as chairman of the executive committee in 1899-1900." It bears the signatures of the late president, Sir Edwin Saunders, and the general secretary. A deputation from the committee of three members was appointed to wait upon Mr. Waterer, and present him with the address. The business transacted was mainly routine. A suggestion, made by Mr. Norman Davis, that some form of memorial of the late president should be provided was considered, and action postponed till the next meeting of the committee. Resolutions of thanks to A. Tate, Esq., and Mrs. Tate for their permission for the members to visit the gardens of Downside, Leatherhead, on the occasion of the annual outing on July 8th, and for their general hospitality; and to A. Dixon, Esq., for the privilege of visiting Cherkley Court on that occasion, were carried with acclamation, and ordered to be sent to the gentlemen named. Regret was expressed that no report of the outing had found its way into the gardening papers, and it was explained that no means had been adopted to secure the presence of the representatives of the horticultural journals at the outing. The matter of securing a president in succession to the late Sir E. Saunders was also considered, and preliminary action taken. It was agreed that the annual dinner should be held as usual at the end of November, and a small committee was appointed to procure information as to suitable accommodation for the same. Nineteen candidates for membership were duly elected, and the following societies were admitted to affiliation:—The Tamworth and District Chrysanthemum Show; Stoke Newington, Stamford Hill, and Clapton Chrysanthemum Society; Gainsborough and District Chrysanthemum Society; and the Olveston Chrysanthemum (Glos.) Society.

Sheffield Chrysanthemum Society.—The annual exhibition will take place at the Cutlers' Hall, Sheffield, on Friday and Saturday, November 15th and 16th.—W. HOUSLEY, *Secretary*.

Death of Monsieur Louis Cusin.—M. Louis Antoine Cusin died at Villeurbanne, Lyon, on the 1st of August, aged seventy-seven years. He was well known as a botanist at Lyon, and held the professorship of the School of Agriculture there. He was furthermore general secretary to the Rhône Horticultural Society, and ex-president of the Botanical Society of the same region. M. Cusin, however, specially devoted his energies to the Pomological Society, of which he was also general secretary.

French Honours to Mr. Martin J. Sutton.—On behalf of his Excellency, M. Cambon, the French Ambassador (reports the "Times" of August 21st), M. Rey, Officier d'Academie, yesterday, at the Abbey Hall, Reading, in the presence of a large assembly, presented to Mr. Martin J. Sutton, head of the firm of Sutton & Sons, the insignia of the Ordre du Merite Agricole as a further recognition by the French Government of Mr. Sutton's successful efforts in the improvement of grass and arable husbandry in France and England, and especially in the advancement of agricultural education in both countries. Mr. Sutton was decorated with the Cross of the Legion of Honour by the President of the French Republic in 1878 for international services rendered to agriculture.

Legal Notes.—Rights of Property in Mushrooms.—An interesting question was raised in the Jedburgh Sheriff Court the other day, when some young men were charged with stealing Mushrooms from a field. For the accused it was urged that the complaint was irrelevant, on the ground that taking Mushrooms was not a crime known to the law of Scotland, and Mushrooms were not an industrial crop. Sheriff Campbell overruled this objection. He said that when things like Mushrooms were private property and possessed a market value they were under the protection of the law, criminal and civil. On the lines of existing authorities he could not doubt that Mushrooms were private property, whether of the landlord or tenant who paid the rent. The reason why no precedent for the charge had been quoted might be that owners and occupiers had not thought it worth while hitherto to put the criminal law in motion. No penalty was imposed, the Procurator-Fiscal stating that he wanted only a judgment on the point.

The Burghley Park Trees.—The members of the English Arboricultural Society, when holding their annual meetings two weeks ago at Peterborough, under the presidency of Professor Somerville of Cambridge University, visited Burghley Park, the Marquis of Exeter's seat at Stamford. The park, which is 1500 acres in extent and seven miles in circumference, is very well wooded, and contains some stately Oaks and fine specimens of Beech, Larch, Ash, &c. One fine Oak was measured up as containing 400 cubic feet of timber, and the "King Tree," so called because it is the straightest and cleanest in the park, measures 422 cubic feet, and shows no sign of decay, though over 300 years old. Half-a-dozen instances were given of Burghley Oaks making of late years over £70, in one instance £81 being reached. The visitors were naturally interested (says the "Westminster Gazette") in a Lime tree planted by Queen Elizabeth in the west front of the mansion. It was partly blown down nineteen years ago, but from its trunk new wood has sprung, and is now full of foliage. An Oak planted by Queen Victoria in 1846 on the south front is also flourishing, together with another planted by the Duke of Clarence, but the tree planted by the Prince Consort is dead, though a companion to the late Queen's is growing in its place. The historic and artistic treasures of the mansion excited much admiration, and particularly the unique carving by Grinling Gibbons and some very fine panelling, while a reminiscence of Queen Victoria's arboricultural pursuits was shown in a small wooden spade bearing the inscription, 'Spade used by her Majesty Queen Victoria to plant an Oak tree on the south front, Burghley, November 16th, 1846.' The members subsequently returned to Peterborough, where the annual dinner was held at night. The society, as a result of its conference, has decided to add to its standard subjects for essays the question of the natural regeneration of Oak and Beech woods (Professor Somerville lamenting that Nature's abnormal acorn crop of last year was wasted), the relative durability of British-grown exotic trees, the management of young trees designed for streets and avenues, and the growth and freedom from disease of Larches other than *Larix europæa*.

Appointment.—Mr. W. Apted has been appointed head gardener to Mrs. Wynn Griffith, Llanfair Hall, Carnarvon, Wales. He was lately with Lady Storey, Westfield House, Lancaster.

Cassell's Dictionary of Gardening.—Part 4 (price 7d. net) of the above has been issued. It starts at "Bulbs" and ends with a treatment of the genus "Cerasus," the Cherry. A coloured plate of *Kniphofia longicollis* is presented with this part, and, as usual, there are many very effective illustrations.

Fruit Prospects poor in Missouri.—From data collected by L. A. Goodman of the State Horticultural Society, it appears that the fruit crop will be very short, because of protracted drought lasting about ninety days. Not only is the crop of this year short, but Apple trees show injury. Orchards which have been well cultivated are doing best.

Dangers of Spraying Potatoes.—An inquest was held at Ballymena, co. Antrim, last week on the body of Mr. James Gordon Ballee. The deceased was engaged in spraying Potatoes on Monday and Tuesday, and was taken very ill on Tuesday night. Two doctors who were called in deposed that death resulted from collapse following an irritant poison, possibly absorbed from the mixture of sulphate of copper used in spraying machines. The jury returned a verdict in accordance with the medical evidence.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighborhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

A Sale of Prunes.—An interesting paragraph appeared in American fruit journals under the title of "Who Bought the Prunes?" "So many as 24,000,000 lbs. of Prunes were bought, and attracted much interest naturally among the Prune people of Santa Clara county. At the time of the sale it was announced by those directly connected with the purchase that they were bought through the Packers' Company by eastern dealers. A pretty well authenticated report stated that this enormous quantity of fruit was really bought by Porter Brothers, and that the check for 50,000 dols to bind the sale that was put up at the time, while bearing another name, was really the check of Porter Brothers Company, who are known to all fruit growers of the coast as well as California. This company is the pioneer in the fruit-shipping industry, and the word of the firm is worth 100 cents on the dollar in Uncle Sam's gold. What, then, does this mean? It can only mean that when a firm thoroughly in touch with commercial conditions in the fruit world is willing to put its money in the product of the orchards, there is profit ahead."

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
August.		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
Sunday .. 18	S.	deg. 72.9	deg. 62.0	deg. 81.8	deg. 52.6	Ins. —	deg. 63.6	deg. 63.0	deg. 60.4	deg. 46.7
Monday .. 19	E.S.E.	72.2	68.0	78.7	53.3	—	65.0	63.2	60.4	46.6
Tuesday 20	E.N.E.	64.7	56.5	72.2	54.2	—	65.3	63.5	60.4	48.6
Wed'sday 21	E.N.E.	64.9	58.9	73.0	53.8	—	64.9	63.5	60.4	44.0
Thursday 22	E.S.E.	59.2	56.2	75.0	47.4	—	63.8	63.3	60.4	37.7
Friday .. 23	E.S.E.	59.9	57.6	77.3	45.8	—	62.6	63.0	60.4	36.9
Saturday 24	E.S.E.	62.0	59.3	76.5	47.2	—	62.0	62.6	60.4	39.3
						Total				
MEANS ..		65.1	59.1	76.4	50.6	—	63.9	63.2	60.4	42.8

The week has been remarkable for misty mornings and bright, fine days, with light breezes.



"Where is the Exhibition?"

I think if secretaries of shows when inserting the date, &c., of their meetings would at the same time name the county or large town the place is near, it would be a great boon to exhibitors, as in many instances, although I have an atlas, I am at a loss to know whether the place is north or south, far or near, and therefore don't know whether it is worth while to enter or not.—F. G.

[Our correspondent is not the only one who has made a similar complaint, and letters asking "Where is the Exhibition?" are continually received by us.—ED.]

Rust on Grapes.

I lately saw a curious instance of rusted Grapes, one or two facts in connection with which are worthy of note. The vinery in which these Grapes are growing is a small lean-to, ventilated by means of sliding sashes in front, and on the upper half of the roof by movable lights, which slide down and are pulled up by ropes. The house contains two Vines, managed on the extension system; one is a Black Hamburgh, and the other a Black Prince. Both are carrying a heavy crop, both are alike vigorous, and here the similarity ceases; for with but one slight exception the foliage and fruit of the Black Prince are perfectly healthy and free from any disease, while the Black Hamburgh is diseased both in fruit and foliage. The backs or under sides of all the leaves developed in the earlier stages of its growth are covered with warts, and almost the whole of the fruit is regularly encrusted with rust, and yet although so severely affected, the fruit has continued to swell; but so unsightly is the effect produced by the rust that hardly a bunch will be fit to send to table. The foliage of the sub-laterals is perfectly healthy, so that it is quite evident the diseased foliage does not arise from any debility of the Vine, but from external causes. The disease of the foliage is doubtless caused by its being subjected to the action of a close warm temperature saturated with moisture, and that of the fruit in this case by a sudden change in the temperature of the house during setting, in consequence of which the cuticle (peculiarly sensitive at that period of its growth) became affected, and the rust has gradually spread till it has almost covered the entire surface of the berries. Slight traces of rust visible on a few berries of Black Prince at the top of the house, right under the part at which the cold air must have entered, tend to lead one to the above conclusion, as with this slight exception the Black Prince Vine is entirely free from disease; its tougher cuticle and more hardy constitution apparently enabling it to withstand the effects of a treatment which has proved so fatal to the crop of its more delicate neighbour.—E. L., Kent.

Disa grandiflora from Seed.

In your interesting article on Disas, p. 145, August 15th, I see no reference or assistance as to raising Disas from seed. Taking *Disa grandiflora* as an instance, the seed should be sown as soon as it is ripe; but if that does not happen until late in autumn it would be safer to postpone the sowing until the following September or the last week of August. There are two modes of sowing the seed, each of which has its advocates. One of them consists in sowing on living sphagnum in a pot or pan. The moss must be kept always moist, and this may be effected by constant and very gentle dews, as the danger of a regular watering as ordinarily understood is that the seed would be washed down too deeply. The other plan is to sow on a sod of turf, as we call it in Ireland, or hard peat, as you would probably understand it—I mean the peat as prepared for fuel. Let it be well soaked in water. Sow the seed thickly on its upper surface. Cover all with a bellglass, and place it in a cool, damp, and shady place. The turf must never become dry, but the spraying of water must be of the gentlest description. A good plan for watering very fine seeds is to dip a stiff-haired brush in water and to draw the hand briskly against it at such a distance as that only the finest dew reaches the seed.

When the seedlings appear they must have more air. When they can be handled they should be pricked off into small pots, or into pots not less than 4 inches in diameter. The compost for the seedlings for the first two years should be somewhat similar to that for mature plants, only that the peat should be considerably finer for an inch or two on the surface, and a much larger proportion of silver sand is necessary. The after treatment as regards ventilation, situation, and water is similar to that for established plants.

While I am on this subject I would warn persons whose stock is

limited to a plant or two, not to be too anxious for seed. One pod on a healthy plant is quite sufficient, as seeding retards the autumn growth and recovery after the labour of flowering.—FREDERICK SYMONS, Co. Dublin.

Dahlias at the Crystal Palace.

At the popular horticultural exhibition of the Agricultural and Horticultural Association, Limited, which was held on August 16th and 17th at the Crystal Palace, the Dahlia classes formed a feature of some interest, chiefly because they were thus in the competition for the first time in the present season. The newer types of Cactus Dahlias are very beautiful subjects indeed, and before anyone can stage a collection of two dozen, or even one dozen, meritorious blooms worthy of obtaining first honours in the larger competitions, a few years of probationary experience are required. The stands shown in the illustration (kindly lent by the above Association) represent those of Mr. H. A. Needs, and Mr. W. Baxter, the chief winners (first and second respectively) for twelve Cactus Dahlias. The illustration shows that plenty of space is allowed between the blooms, and also that their best points are fully shown by the blooms being well and boldly set up on the stands. Mention of these exhibits was made in our report of the show upon page 158 of our issue of last week.

Peach Grosse Mignonne.

THE illustration upon page 205 represents a heavily cropped Peach tree, as grown by Mr. D. Paxton at Hitchin Grange, Taplow. The variety is *Grosse Mignonne*, and was planted twenty-one years ago, when Mr. Paxton first took charge of this garden. During this period it has never been known to fail in carrying a good crop of fruit. Last year over 250 fruit was gathered from it. It may be mentioned that the Peach border is 5 ft. wide, having been made of loam, with old mortar rubble worked in with it, no drainage being used on account of the gravelly bottom. The wall is about 12 feet high, with a west aspect; most of the trees have covered the wall, and are now pruned on the spur system as much as possible. Attention is given to the trees as regards summer pinching and thinning out. As mentioned in a previous issue, the garden being on a slope it is necessary to make a circle round each tree before watering; but having a good supply of water near at hand and plenty of liquid manure from the cow sheds this difficulty is overcome. To this supply of manure Mr. Paxton attributes much of his success in fruit growing, with a free use of the syringe in the afternoon, seldom being troubled with any insect pests excepting earwigs, which are at times very troublesome. No protection whatever is afforded the trees during the time they are in bloom.—JOHN BOTLEY.

"Waste Not, Want Not."

(Concluded from page 175.)

THERE were now loud calls for Mr. Vine, who rose and said, that "no one rejoiced more than he did at this important meeting. With all his education and training at Hampton Court, still he was no orator. You are all well aware," he said, "that our family, for many years, was half poisoned by lumps of garbage (hear, hear), until I made it known, many years ago, that I had found capital food in a large sewer, which I discovered near me. I do not care what soil I am grown in, so long as I get plenty of rich liquid (hear, hear). I am quite convinced of the great utility of the sediment and charred peat mixed. I am quite concerned to hear that the sewage of London is thrown into the sea" (much cheering).

The Vice-President, Mr. Cabbage, next rose and said, "that he was not accustomed to speak, being more in the field; that his family were mostly dummies (laughter). I beg pardon, I mean Drumheads (cheers). You may expect to hear much from me; but I assure you that our treatment is so simple in the Feltham Fields, that, by proper sowing, proper trenching, with plenty of manure, we are always good-hearted ('hear,' from a half-starved Buckinghamshire Turnip). As I understand that we have met here to-day to give our opinion on the possibility of converting the sewage of London into a rich manure with the Irish charred peat, I, for one, am most willing to bear testimony to its goodness, and express my conviction that to our country friends it will prove a great boon, and I advise them to stir their stumps in the matter" (great cheering).

His Royal Highness the Strawberry wished to say one word before this meeting separated. "My family are well known to you all ('hear, hear'). It matters but little where we came from—Chili, Virginia, or

the back woods of Great Britain. Travelling has altered us much; we were like the rest of you at one time, very wild, and always produced runners (laughter). Education does wonders to us all. We were at one period called Woodberry; but since the days of two celebrated Dutch gardeners we have been called Strawberries, because they put straw for us to lie upon to keep us from being soiled ('hear, hear'). Feeling as we do so lively an interest in this great meeting concerning additional food for the masses of the vegetable kingdom, I feel it my incumbent duty to give my most cordial consent, for charred peat alone has proved good to my family" (tremendous applause).

The meeting becoming impatient, loud cries came from all parts of the room for Mr. "Perfection" Cucumber, from Broxbourne. He coolly rose and said, "May it please your Royal Highness and gentlemen, I have no drawing to show you, as my only practice in that

with it. I propose there to have at least six enormous reservoirs, each to hold the flow of at least forty-eight hours, and parallel to each other, with thorough drainage to draw off the clear water (hear, hear), with engine-house, with glass and iron-roofed drying sheds. The space occupied might be some 50 acres (hear, hear). We all know that there are some 3 millions of acres of rich black vegetable peat in Ireland. It is now in a ripe state. Why allow it any longer to lie there in waste? I have tried it for years upon my family in its naked state; but, had it been mixed with the sediment of our great sewers, it would have been the best of food. I also know many other relations who have used it for years. I am well aware that this is a momentous question, and aware, also, that many valuable salts will be lost in the solution; but to tell me that the sediment will not be worth saving is just saying that there is no goodness in the mud of ponds ('hear, hear,' from Mr.



DAHLIAS AT THE CRYSTAL PALACE.

has been with the family of the Vice-President (great laughter and 'hear, hear,' from Mr. Radish). I have listened with profound respect to all that has been said, and it does seem to me strange that an enlightened country as this is should so long misunderstand, and, above all, have such a prejudice against, the very food of the earth. You may call it muck, or dung, or litter, or filth; but I tell you all that it ought to go by its proper name—the food of plants (great cheering), deposited in the earth for our benefit" ("hear hear," from Mr. Parsnip. The President here interrupted, and said that he had had a telegraphic message that, unless the speeches were short, the *Journal of Horticulture* representative could not stay, as he had to attend elsewhere). "Quite right; I shall give you just a few humble ideas of my own upon this interesting subject. I really turned yellow when Mr. Onion told us how they do in Spain—that even the children in his country know the value of the food of plants. My family in this country have nothing to complain of. We belong to the aristocratic side, and very often complain of the gout, and have white powder on our head (roars of laughter). My plan is simply this—that wherever the sewage of London may be carried down Father Thames, it is at the terminus that we should have to do

Melon). The reason why the mud of a pond is not rich when first taken out is owing to its having been excluded from the air. Turn it over a bit, and then try its strength ('hear, hear,' from Mr. Swede). I wish to make this London manure portable to all our country friends; and I wish every town to husband up and assist in saving the food of the land. Let townspeople only think that if we were to keep back our good things for even one week ('hear hear,' from the Staff of Life) from this great metropolis, they, to say the least of it, would be in a terrible pickle (great laughter).

The President concluded the meeting by saying, "You have every one done famous duty. This great meeting will go forth to the world through the active columns of the *Journal of Horticulture*. We are deeply indebted to Mr. 'Perfection' for his crispness of observation (cheers, and 'hear,' from Mr. Celery). I am well aware that many of you from a distance are half starved, and you show it (general murmurs). You have to live on a barrowful of wasted manure to 6 square yards (cries of 'Not so much as that,' and 'Shame, shame'). Go, then, and report this meeting to every corner of our islands, and tell your towns to put the right men in the right place" ("hear, hear" —great confusion, many of the members going away).



Wood Ashes as a fertiliser are specially valuable used in conjunction with stable manure. They contain the elements of potash and phosphoric acid in proportions of about 5 and 2 per cent., the potash sometimes running to 7 per cent. The Canada wood ashes made from hard woods are the richest.

Gathering Cloves.—The Clove tree grows to from 40 feet to 50 feet high, with large oblong leaves and crimson flowers at the end of small branches in clusters of from ten to twenty. The Cloves are at first white, then light green, and at the time of gathering bright red. Pieces of white cloth are spread under the trees at harvesting time, and the branches are beaten gently with Bamboo sticks until the Cloves drop. They are dried in the sun, being tossed about daily till they attain the rich dark colour which proclaims them ready for shipment. A Clove tree begins to bear at the age of about ten years, and continues until it reaches the age of seventy-five years.

Flower Gardens of the Sea.—The sea has its flower gardens, but the blooms are not on plants as they are on the land. It is the animals of the sea that make the gardens, the corals of the tropical waters, particularly, making a display of floral beauty that fairly rivals the gorgeous colouring and delicate grace presented by land flowers. So closely do they resemble plant blooms that it is hard to believe that they are wholly animal in organisation. Dr. Blackford, in the *Chicago Chronicle*, says that among the coral gardens there are fishes of curious forms and flashing colours darting about, just as the birds and butterflies dart about plant gardens on land.

The Largest Oak.—The Cowthorpe Oak is reputed to be the largest Oak, and is over 1600 years old, and the branches cover half an acre. At the close of the seventeenth century, according to Evelyn's "Sylva," it was 78 feet in circumference at the base of trunk. Since then a quantity of earth has been placed round it as a support. It is estimated to contain at the present time 73 tons of timber. On Jubilee Day, 1887, says a writer to the "Daily Mail," the vicar of St. James's Church, Wetherby, and the two churchwardens and ninety-five Sunday scholars got inside the tree at the same time and hoisted the Union Jack and sang the National Anthem and the "Old Hundredth."

Stone-splitting in Peaches.—Most people are familiar with the fact that, in opening Peaches, the two halves of the stone will sometimes be found separated. Examined by a good pocket lens, the mycelium of a fungus will be found connected with this condition. There seem to have been no carefully conducted observations on this stone-splitting state, but from analogy one might infer that the fungus had to do mainly with the result. If there had been any exposure to the air, this inference would not be warranted, as a spore might float on the diseased portion, but in this sealed up state, it can only be supposed that a spore made its entrance into the fruit in its early condition, and grew with the fruit's growth.

Jottings on Pines.—It is now necessary to exercise care in the treatment of young stock to prevent the growths becoming too luxuriant, that is, soft, artificial heat and free ventilation being employed, admitting air at 80°, above which ventilate liberally, especially on warm sunny days, always avoiding currents of cold air and sudden depressions of temperature, and closing the house for the day at 80°. Maintain a night temperature of 65°, and 70° to 75° by artificial means in the daytime. The bottom heat should be kept steady at 85° at the base of the pots, or between 80° and 90°. Water only when absolutely necessary, then afford a thorough supply of weak liquid manure, warmed to the temperature of the plunging bed. The plants will only need syringing occasionally, and it should be effected early in the afternoon of bright days, and not excessively. Fruiting plants require a liberal amount of heat and moisture, a night temperature of 70° to 75°, and the heat in the daytime should range from 80° to 90°, closing the house at 80° with sun heat, so as to insure a rise of temperature from that source. Avoid, however, a close and very moist atmosphere, as that accelerates the growth of the crowns; also an excess of nourishment, or the fruit may, when cut, be found black in the centre.—PRACTICE.

Alternantheras.—This is about the best time to take a crop of cuttings from these plants. Put the cuttings into a box having a sandy compost in the greenhouse and keep them shaded and reasonably moist; they will root quite easily. After they are rooted the best way to handle them is to plant them close together in shallow flats, where they may remain until January next, at which time they can be potted up and grown right along.

Why we Prune.—First, to modify the vigour of the plant; second, to produce larger and better fruit; third, to keep the tree within manageable shape and limits; fourth, to change the habit of the tree from fruit to wood production, or *vice versa*; fifth, to remove surplus or injured parts; sixth, to facilitate harvesting and spraying; seventh, to facilitate tillage; eighth, to train plants to some desired form.

Lemon Jelly.—Rub the yellow rind of three large Lemons upon $\frac{1}{2}$ lb. sugar, pour over it the strained juice of six Lemons, and put it into an enamelled pan with 1 oz. of isinglass, 1 pint of water, and a glass of sherry. Stir these over the fire until the isinglass is dissolved, strain the jelly through a bag, and if not perfectly transparent mix it when cool with the whites and crushed shells of three eggs with $\frac{1}{4}$ pint of cold water. Let the jelly boil for three minutes without stirring, then let it settle for five or six minutes, and strain it again. Set it in dishes or in small jelly glasses.

Cut Flowers in America.—A paragraph going the rounds says:—"The Agricultural Department gives some interesting statistics showing the surprising growth of the cut-flower business in recent years. The retail value of cut flowers sold annually is now 12,500,000 dols. Of this no less than 6,000,000 dols. is paid for Roses, 4,000,000 dols. for Violets, and 500,000 dols. for Chrysanthemums." Roses and Violets are popular; but it seems incredible that ten millions out of twelve should go for these two items alone. Can it be possible that twice as much money is spent for Violets alone, as for Orchids, Carnations, Lilies, Daffodils, and all other flowers, Roses not counted?

Mulberries Dying Out.—Mulberries are now making their fitful appearance in our fruit shops, says the "Evening News," London, and those who have a special fondness for this luscious fruit, and who know how prodigious is the yield of some trees, cannot but wonder why it is not offered for sale in greater quantities. The opinion of Covent Garden is that those who grow fruit for profit cannot afford to plant Mulberry trees. Seven whole years must elapse before a tree will yield, and with land at its present price, market gardeners will choose for cultivation any other fruit tree rather than the Mulberry. Another drawback to the commercial success of the fruit is that it travels so badly and cannot be kept.

The Forests of Denmark.—In relation to the article in the June number of "Meehans' Monthly" on the Forests of Denmark, Mr. P. J. Pedersen says: "You make me say that the natural forests of Denmark consist almost entirely of Beech, Jnniper, and Yew, while I meant to say that they consist almost entirely of Beech, and only mentioned the two latter plants to state the fact that they now are the only Conifers to be found in a wild state. I believe I put it thus, . . . consisting almost entirely of Beech—Jnniper and Yew (T. b.) now being the only Conifers, &c. The Jnniper, is, certainly, quite prevalent in some localities, but is little more than a shrub, although it will, in some instances, reach a height of about 25 feet. Of the Yew, only a few hundred specimens are to be found in forests of south-eastern Jntland, and it would be wrong to give either of the two plants almost equal rank with the Beech."

Osmunda regalis.—Mr. Druery, at the meeting of the Scientific Committee held on August 13th, exhibited fronds of an entirely new type of *Osmunda regalis* recently found in co. Kerry by M. M. A. Cowan, of Penicuik, and W. Boyd, of Melrose. Nine plants in all were found, six of which were fertile, and three barren, the latter being more finely cut than the former, and apparently forming the pinnae type of the species. In both forms the usually simple pinnules, with quite smooth edges, are deeply lobed on the edges on the lower and larger divisions, which, towards the upper part of the frond, merges into a distinct and thorough tertiary pinnation, rendering the frond extremely handsome. The fertile spikes consist also of rows of bead-like sporangia, while normally these are only slightly lobed. Mr. Druery has named Mr. Cowan's form *O. r. decomposita*, reserving the naming of Mr. Boyd's find until its distinct character is confirmed.

Societies.

Royal Horticultural, Drill Hall, August 27th.

Save for two fine collections of Apples, one of Gladioli, and another of mixed herbaceous flowers, the Drill Hall exhibition on Tuesday last was very uninteresting and meagre.

Floral Committee.

Mr. John Russell of Richmond Nurseries, Richmond, staged a splendid group of Alocasias, in which there was a number of entirely new and distinct varieties, some of superior merit, and received a silver-gilt Banksian medal. A large group of hardy plants were brought forward by Mr. Maurice Prichard of Christchurch, Hants. He had a very beautiful soft rose lilac single Pyrethrum named Pericles, together with *Zauschneria californica*, &c. (silver Flora medal). Mr. Arthur W. Wade, Riverside Nurseries, Colchester, had a tasty collection of Sweet Peas, Montbretias, Lilliums, and other hardy plants, which obtained for him a silver Banksian medal; while from Messrs. M. Young & Son, Milford, near Godalming, came an exhibit of dwarf Ericas. These were an innovation, and as such were justly appreciated. The double Heather and *Meziesia polifolia alba* were exceedingly pretty (silver Banksian medal).

Sweet Peas in varieties and *Dianthus* shown in vases came from Messrs. Harrison & Sons, Leicester. All the newest Sweet Peas were included.

Messrs. Barr & Sons set up one of the most complete collections of Gladioli they have at any time had. *Gallieni*, crimson; *Gazelle*, lilac-mauve; *Hercules*, scarlet; and *Grandesse*, pale rose mauve, were superb (silver Banksian medal). Messrs. J. Laing & Sons, Forest Hill, S.E., staged nice young *Caladiums*, multiflora hybrid *Streptocarpuses*, and winter flowering *Begonias* (silver Flora medal).

Orchid Committee.

Orchids were not numerous. Mr. F. W. Thurgood, gardener to H. T. Pitt, Esq., Rosslyn, Stamford Hill, arranged a small group. There were *Dendrobiums*, *Phalænopsis*es, *Odontoglossums*, *Miltonias*, *Cypripediums*, *Vanda cœrulea*, *Lælio-Cattleya callistoglossa*, and one or two others. Messrs. J. Veitch & Sons, Ltd., Chelsea, showed *Lælio-Cattleya Wellsiana* *superba*, *L.-C. Digbyano-Mendeli*, Veitch's var.; *L.-C. Robin Measures* var. *Ena*, *L.-C. Andreana*, *Lælia Patini*, and *L. Stella* var. *De Barri* Crawshay, Esq. (grower, Mr. W. J. Stables), Rosefield, Sevenoaks, sent *Miltonia Cognianxia rosefieldensis*, and *M. Regnelli citrina*. Mr. W. P. Bound, gardener to Jeremiah Colman, Esq., Gatton Park, Reigate, showed *Odontoglossum tripudians*, Gatton Park variety; and Mr. E. Hill, gardener to Lord Rothschild, Tring, *Schomburgkia Lyonsi*. Mr. J. Brooks, gardener to W. M. Appleton, Esq., Weston-super-Mare, staged some hybrid *Cypripediums*, and a few others showed small exhibits of Orchids.

Fruit and Vegetable Committee.

Messrs. Jas. Veitch & Sons, Ltd., Royal Exotic Nursery, Chelsea, contributed from Middle Green Farm, Langley, a collection of early dessert Apples, a few Pears, Crabs, Plums, and Currants. There were a score of varieties of Apples, and the fruits were beautifully developed and of grand colour. The skins were clean, and the majority of the specimens were rather over average size. The sorts comprised the comparatively new Langley Pippin, *Evagil*, *Duchess' Favourite*, *Cumberland Favourite*, *Summer Thorle*, *Irish Peach*, *Oslin*, *Early Joe*, *Worcester Pearmain*, *Early Julian*, *Duchess of Oldenburg*, *Astrachan*, *Beanty of Bath*, *Devonshire Quarrenden*, *Early Strawberry*, *Lady Sudeley*, *Kerry Pippin*, *Gravenstein*, *Yellow Ingestrie*, and *Peter the Great*. The Pears were *Jargonelle*, *Williams' Bon Chrétien*, *Beacon*, and *Clapp's Favourite*. The Plums included *Denniston's Superb*, *Pershore*, *Curlew*, and *Nectarine*. Currants were represented by *White Dutch*, *Cut-leaved*, and *La Constante*; while Crabs were *Transcendant* and *Dartmouth* (silver Knightian medal).

Mr. W. Taylor, gardener to H. W. Buddicom, Esq., Mold, North Wales, sent *Tomato Klondyke*. Mr. H. Nicholls, Mill Road, Deal, showed a seedling *Nectarine* named *Deal*. The superintendent of the R.H.S. Gardens, Chiswick, contributed *Plums Golden Esperen* and *Windsor Early*. Mr. H. Gandy, gardener to Lord Walsingham, Merton Hall, Thetford, sent *Melon Thirkleby Hall*.

A large collection of Apples, Plums, and Pears was arranged by Messrs. G. Spooner & Sons, Hounslow. The fruits as a whole were of good size, clean, and bright. Amongst the most noticeable Apples were *Lady Sudeley*, *Lord Suffield*, *Worcester Pearmain*, *Royal Jubilee*, *Devonshire Quarrenden*, *Potts' Seedling*, *Wealthy*, *Stirling Castle*, *Universal*, *Keswick Codlin*, *Vicar of Leighton*, *Frogmore Prolific*, *Grenadier*, *Rivers' Codlin*, and *Domino*. The Plums comprised *Victoria*, *Prince of Wales*, *Belgian Purple*, *Belle de Lonvain*, *Early Transparent*, *Gisborne's*, and *Denniston's Superb*. The Pears were *Souvenir du Congrès*, *Williams' Bon Chrétien*, and *Beurré Clairgeau* (silver Knightian medal). Mr. O. Ross, gardener to Captain Carstairs, Welford Park, Newbury, showed a new seedling Apple named "Ruddy," and *Melon Baden Powell*.

Certificates and Awards of Merit.

Acer Negundo aureum odessanum (E. Kromer).—A very handsome form; the colour is pure yellow and soft green (award of merit).

Brunsvigia grandiflora (Paul & Son).—A superb plant; the colour is soft rose feathered with a deeper shade (first-class certificate).

Clematis Ville de Lyon (Barr & Sons).—This is a hybrid from *coccinea* and *viticella*; the colour is dull crimson (award of merit).

Cypripedium Rolfei (W. M. Appleton).—This is a hybrid from *bellatulum* and *Rothschildianum*; the basal colour of the dorsal sepal is pale green, with markings of dull crimson; the colour markings are similar in the petals, and the base white; the lip is bright claret (award of merit).

Cypripedium mixia superba (H. J. Chapman).—A handsome hybrid from *Fairrieanum* and *Lawrebel*. The dorsal sepal is green brown, with rose and white margins; the petals are deep claret, with black crimson spots; the pouch is dull claret (award of merit).

Gladiolus hybridus princeps (W. Bain).—A magnificent form; the colour is brilliant scarlet, with creamy white on the lower portions (award of merit).

Gladiolus Columbine (M. Prichard).—This is very fine; the colour is salmon red, with dark blotches (award of merit).

Gladiolus Lemoinei Eclipse (M. Prichard).—A striking form; the colour is white, with very intense velvety crimson on the front (award of merit).

Lælio-Cattleya Digbyano-Mendeli Veitch's var. (J. Veitch & Sons).—A superb flower; the prevailing colour is rich rose, the throat being lemon (first-class certificate).

Lælio-Cattleya Arnoldiana (R. Tunstill).—This bigener is from a cross between *Lælia tenebrosa* and *Cattleya Hardyana*; the narrow petals are pale buff, with a red suffusion, and the petals reddish buff; the handsome lip is crimson purple (award of merit).

Lælio-Cattleya Robin Measures var. Ena (J. Veitch & Sons).—This is from a cross between *Lælia xanthina* and *Cattleya Schofieldiana*; the sepals and petals are pure yellow; the lip is crimson, with paler markings and a white edge (award of merit).

Nelumbium speciosum roseum plenum (J. Hudson).—A magnificent flower, of which the varietal name describes the colour (first-class certificate).

Nelumbium speciosum album plenum (J. Hudson).—This has equal merits with the preceding, but the colour is pure white (first-class certificate).

Nelumbium speciosum Kinshiren (J. Hudson).—This is chastely beautiful; the colour is white, margined with rose (award of merit).

Goole, Yorks, August 15th.

The Goole and District Horticultural Society held its tenth annual show on Thursday, the 15th inst., on the pleasantly situated Victoria Pleasure Grounds. Unfortunately the weather in the early morning was not at all favourable for the event, but in the afternoon the rain ceased, and the sun appeared, when the well dressed townspeople trooped into the show grounds by hundreds. If the attendance suffered slightly in numbers, there was no falling off in the show itself. The groups were well praised and deserved it, stove and greenhouse plants were well and numerous shown, cut flower classes were strongly contested, while Roses, for the season, were particularly good. Vegetables, as usual, were clean and well grown, and cottagers keenly contested for the principal prizes.

The principal prizewinners for twelve stove and greenhouse plants were—first, Mr. Nicholls; second, Mr. H. H. Broadley; and third, Messrs. R. Simpson & Son. Groups.—First, Mr. H. H. Broadley; second, Messrs. R. Simpson & Son; third, Mr. J. Blacker. Six foliage plants.—First, Mr. H. H. Broadley; second, Mr. F. Nicholls. Six greenhouse plants.—First, Mr. R. Creyke; second, Mr. R. S. Schofield. For six Zonal Pelargoniums.—First fell to Mr. R. Creyke; second, Messrs. R. Simpson & Son. For six plants for dinner table.—First and second, Mr. J. Blacker. For six exotic Ferns.—First, Mr. H. H. Broadley. In this division were also exhibited *Balsams*, hardy Ferns, *Coleus*, *Begonias*, *Caladiums*, *Gloxinias*, *Lilliums*, *Asparagus plumosus*, and *Adiantums*.

For one bridal bouquet.—First, Messrs. J. & R. Callam; second, Mr. G. Cotton. One vase on stand for table decoration.—First, Mr. G. Cotton; second, Messrs. R. Simpson & Son. Twelve Dahlias.—First and second, Messrs. Clerk & Son. Eighteen Roses, dissimilar.—First and third, Messrs. Harkness & Son. Twelve Roses, light.—First and second, Messrs. Harkness & Son. Twelve Roses, Teas.—First, Messrs. Harkness & Son. Twelve Hollyhocks.—First, Mr. H. Clark. There were also exhibited in this section vases of Roses, *Begonias* double and single, hand bouquets, *Phloxes*, *Carnations*, *Picotees*, *Gladioli*, *Pansies*, buttonholes and sprays, *Asters*, and *Stocks*.

FRUIT.—Collection of outdoor fruit.—First, Mr. G. H. Shaw; second, Mr. R. Creyke. Collection of fruits.—First and second, *Lady Beaumont*. Two bunches Black Hamburgh Grapes.—First, Mr. H. M. Carter; second, *Lady Beaumont*. Two bunches black Grapes, not Hamburgs.—First, Mr. G. H. Shaw; second, *Lady Beaumont*. Two bunches Muscats.—First, *Lady Beaumont*; second, Mr. R. Creyke. Two bunches white, not Muscats.—First, *Lady Beaumont*; second, Mr. R. Creyke. The following fruits were also shown—*Apricots*, *Plums*, dark and light coloured *Cherries*, *Pears*, *Apples*, *Currants*, and *Gooseberries*.

VEGETABLES.—Collection of nine kinds.—First, Mr. G. H. Shaw. Two Cucumbers.—First and second, Mr. G. H. Shaw. Red Celery.—First,

G. H. Shaw. Beans, Broad.—First, R. Creyke. Beans, French and Scarlet Runners, were well grown and shown, besides White and Red Cabbages, Cauliflowers, Onions, Peas, Carrots, Parsnips, Eschallots. —J. E.

Shrewsbury Show, August 21st and 22nd.

(Continued from page 177.)

To completely report such a large and superior horticultural exhibition as that of the Shropshire Horticultural Society in one issue is a task we have not yet attempted. Our report last week was in the hands of those most interested by twelve o'clock on the morning of Thursday, August 22nd, the second day of the show. Though the leading classes and honorary exhibits were noticed in our previous issue, there are yet others of much value, and about these the following report deals.

Medals and Awards.

LARGE GOLD MEDALS.—For a group of flowering single and double Begonias, to Messrs. B. R. Davies & Sons, Yeovil; for collection of Pentstemons, Messrs. Dobbie & Co., Rothesay, N.B.; for group of Dahlias, Gloxinias, Sweet Peas, Roses, &c., to Hobbies, Ltd. (John Green), Dereham, Norfolk; for collection of Gladioli, Begonias, Geraniums, &c., to Messrs. Richard Hartland & Son, Lough Nurseries, Cork; for fine collection of fruit trees and Vines in pots, to Messrs. Rivers and Son, Sawbridgeworth.

GOLD MEDAL.—To Mr. S. Mortimer, for a very choice collection of Cacti and old-fashioned Dahlias, including all the most beautiful varieties—Uncle Tom, a very deep blackish scarlet; Spitfire, J. W. Wilkinson, Mrs. H. J. Allcroft, and many new and unnamed seedlings.

SMALL GOLD MEDALS.—For collection of Sweet Peas, Dahlias, and other flowers, Messrs. Jones & Sons, Shrewsbury; for collection of herbaceous and cut flowers, Messrs. Dicks, Chester; for collection of Zonal Pelargoniums, beautifully arranged, Mr. A. Myers, Shrewsbury; for collection of Phloxes, Messrs. Gunn & Sons, Birmingham; for collection of herbaceous flowers, Mr. H. Deverill, Banbury; for collection of choice Ferns, Mr. L. J. Ching, Crescent Nurseries, Forty Hill, Enfield, London; for collection of Caladiums, Messrs. Peed & Son, West Norwood, London; Mr. H. Eckford, Wem; Messrs. Hinton, Bros., Warwick; Messrs. J. Jarman & Co., Chard; Messrs. E. Webb & Sons, Wordsley; Mr. E. Murrell, Shrewsbury; Messrs. R. Smith & Co., Worcester; Mr. W. Pattison, Shrewsbury.

Certificates of Merit.

CACTUS DAHLIA SPITFIRE (Mr. S. Mortimer).—A very beautiful bright scarlet variety, with narrow claw-like incurving petals, showing a paler yellowish reverse (F.C.C.).

CACTUS DAHLIA MISS GRACE COOK (Hobbies, Ltd.).—A charming rose pink variety with yellowish-white centre (F.C.C.).

PELARGONIUM BEAUTY (Mr. Geo. H. Towndrow, Malvern Link).—A handsome scarlet bedding and winter flowering variety (certificate of merit).

Plants.

There were three entries in the class for groups confined to the county of Shropshire, and here T. F. Kynerly, Esq., of Leighton Hall, Ironbridge, proved the winner. His group was lightly and prettily arranged, and consisted of a central tall oak construction, with arches springing from the base of this to the corners. The top was crowned with a fine spreading specimen of *Phoenix*, with *Caladiums* at the base, and *Cissus discolor* twining about the fronts. *Begonia Gloire de Lorraine* and *Acalypha Sanderiana* were used with good effect, as were the white form of the *Chimney Campanula* and *Francoa ramosa*. The bottom of this group was very heavy, variegated *Pines*, *Cockscombs*, and *Pandanus Veitchii* being too freely used. For second place Mr. H. H. France Hayhurst had a showy group, but far too heavy. Less than half the material tastefully used would have been better, but in the third prize group from Mrs. Swan of Halston Hall, Oswestry, more material could have been used, this having a very unfinished appearance. For six exotic Ferns Mrs. J. H. Slaney won with very fine specimens; G. Burr, Esq., Oaklands, being second, and J. Barker, Esq., of Castle Gates, third.

W. J. Scott, Esq. (Mr. Jos. Carter, gardener), was first for six stove and greenhouse plants, showing a very fine and profusely flowered *Fuchsia*, *Allamanda Hendersoni*, *Bougainvillea*, *Hoya carnosa*, a *Coleus*, and *Croton*; a very meritorious exhibit. Richard Taylor, Esq. (gardener, Mr. J. Cliff), was placed second, his best plants being a climbing Fern (*Lygodium*) and *Cycas revoluta*. Mr. Jas. Tarrant was third.

A better class was the bracketed one for six specimens, not less than four in flower, and here Lord Harlech had first for a splendid half dozen. *Kentia Fosteriana* and *Croton Comtess* were the foliage plants; *Acalypha Sanderiana*, *Ixora Prince of Orange*, *Eucharis amazonica*, and *Allamanda Hendersoni* being all well in flower. H. H. France Hayhurst, Esq., Overley, Wellington, was second, his best plants being *Clerodendron Balfouri* and *Allamanda grandiflora*.

The *Fuchsias* in pots not exceeding 8 inches were rather a poor lot, Mr. Wace being first, Mr. A. Bateman and Mr. J. Jenks following in the order named.

Messrs. B. R. Davies & Sons of Yeovil showed up well in the class for six Begonias, *Sanspareil*, *Ida*, *Miss Kate Nicholls*, and *Masterpiece* being the best. Mr. F. Davies of Pershore took second place. For six

Fuchsias W. J. Scott, Esq., Besford House, was first, his specimens being magnificently flowered.

There were three entries for the thirty stove or greenhouse plants in 10-inch pots, and probably Lord Harlech's lot (gardener, Mr. Lambert) has never been excelled in this class. He had a superbly flowered *Dipladenia amabilis*, four grand *Ixoras* that would have done credit to any of the open classes unrestricted for pot room, and a large and showy piece each of *Clerodendron fallax* and *C. Balfouri*.

Fine *Areca lutescens*, *Cocos Weddelliana*, and *Phoenix rupicola* were among the foliage plants, and also *Crotons Prince of Wales*, *Ardens*, *Comtess*, and others. Mr. Lambert may well be proud of his excellent exhibit here, also of having beaten Mr. J. Cypher, who took second place. Fine plants of *Dipladenia boliviensis*, *Ixora Duffii* and *Williamsii*, *Allamanda nobilis*, and *Croton montfontainense* were included in Mr. Cypher's collection, and he was closely followed by T. Sutton Timmis, Esq., of Allerton, Liverpool. Mr. Timmis' plants were very fresh and healthy looking, and included a couple of nice specimens of the little seen *Kalosanthes ocoinea*, *Gloriosa superba*, a grand *Croton Warreni*, and a good *Stephanotis*. This class almost filled one side of a tent, and was a fine feature of the show. For twelve *Gloxinias* Mr. Warren was first, G. Burr, Esq., second, and Mr. J. Tarrant third, but the plants were of no great merit.

For six *Caladiums* J. S. Timmis, Esq., was easily first with large and beautifully coloured specimens of *Baron de Mamore*, *Candidissima*, *Souvenir de Madame Bernard*, and *Comtess de Condeiro*. This was a grand exhibit, every plant was perfectly grown, large, and in fine health. H. H. France Hayhurst, Esq., was second with smaller plants, and R. A. Newell, Esq., of Admaston, third.

Vegetables.

We summarised the numerous competitions in the vegetable classes in our report last week, but the following paragraph was held over:—In the class for nine kinds of vegetables, confined to the county of Salop, Mr. John Hay, Ruyton XI. Towns, was accorded first place for a magnificent assortment. Here, again, the Carrots, Tomatoes, Onions, and Potatoes were of great excellence. He also staged handsome Cabbages, Leeks, and Celery, besides smaller vegetables. Hon. R. C. Herbert (gardener, Mr. A. S. Kearsley), Orleton Hall, Wellington, was second, though his Cauliflowers were rather under quality, and third place was occupied by Lord Trevor (gardener, Mr. W. Dawes), Brynkynalt, Chirk, whose assortment lacked the refinement of the higher placed collections. There were seven entries in this latter class, these forming an imposing display of these culinary products.

Fruit.

There was a keen competition in the class for a collection of twenty dishes of fruit. The prizes offered were liberal ones, being £20, £15, £10, and £5. The same valuable amounts were offered in the class for twelve bunches of Grapes, the object being that the fruit should be of the highest cultural merit. *Pines* not being generally grown, are not included in the list, and, as in the case with the exhibits of twelve bunches of Grapes, the collections must be decorated with flowering or foliage plants or cut flowers in suitable vessels, at the discretion of the exhibitor. *Apocynum* of the cut flowers thus used, it may be remarked parenthetically that in nearly all the fruit classes required to be florally decorated, the cut flowers principally affected by the majority of the exhibitors were such as the popular *Montbretias* and *Henchera sanguinea*, both of which, however, require to be used with discretion.

If employed too profusely, richly coloured scarlet-crimson flowers have a strong tendency to contrast inimicably with highly coloured fruits such as Peaches, Neotarines, Apples, and Plums, and in more than one instance was this apparent at Shrewsbury Show, otherwise considerable artistic taste was in the main displayed. In the floral arrangements in question Mr. Jordan of Impney used with pleasing relief sprays of the pale pink *Chironia floribunda*, an old greenhouse plant deserving of extended recognition. Much interest was centred in the class at issue, and of the contestants who sought to try conclusions. Mr. J. Mullins was again to the fore, though closely run by Mr. Goodacre. The collection comprised remarkably fine examples of *Muscato of Alexandria*, *Black Alicante*, *Gros Maroo*, and *Black Hamburgh* Grapes, four fruits of *Best of All Melon*, *Bellegarde*, *Barrington*, and *Stirling Castle* Peaches, and three dishes of *Stanwick Elruge Nectarine*, the latter remarkably fine; 132 points were accorded the collection. Without wishing to make any invidious distinction, we opine that, excellent though it was, it would have been improved by a greater variety of fruit, considering the large number of dishes allowed, twenty. The second honours fell to Mr. Goodacre with a total of 125 points for an excellent contribution of *Muscato of Alexandria*, *Canon Hall Muscat*, *Black Hamburgh* and *Gros Maroc* Grapes, one *Frogmore Orange* and three *Sutton's Al Melons*, *Royal George*, *Walhurton Admirable*, *Ray-makers* and *Bellegarde* Peaches; Lord Napier, Pineapple, and *Spencer* (fine) *Nectarines*, and a good dish of *Souvenir du Congrès* Pear. The third prize was accorded Mr. Jones, gardener to Mrs. F. Need, York House, Great Malvern; the collection contained fine examples of *Madresfield Court* and *Gros Maroc* Grapes; the fourth prize going to Mr. R. Cairns, Balruddery, Dundee, a position he might well feel content with, considering his great achievement in championing the twelve-bunch Grape class.

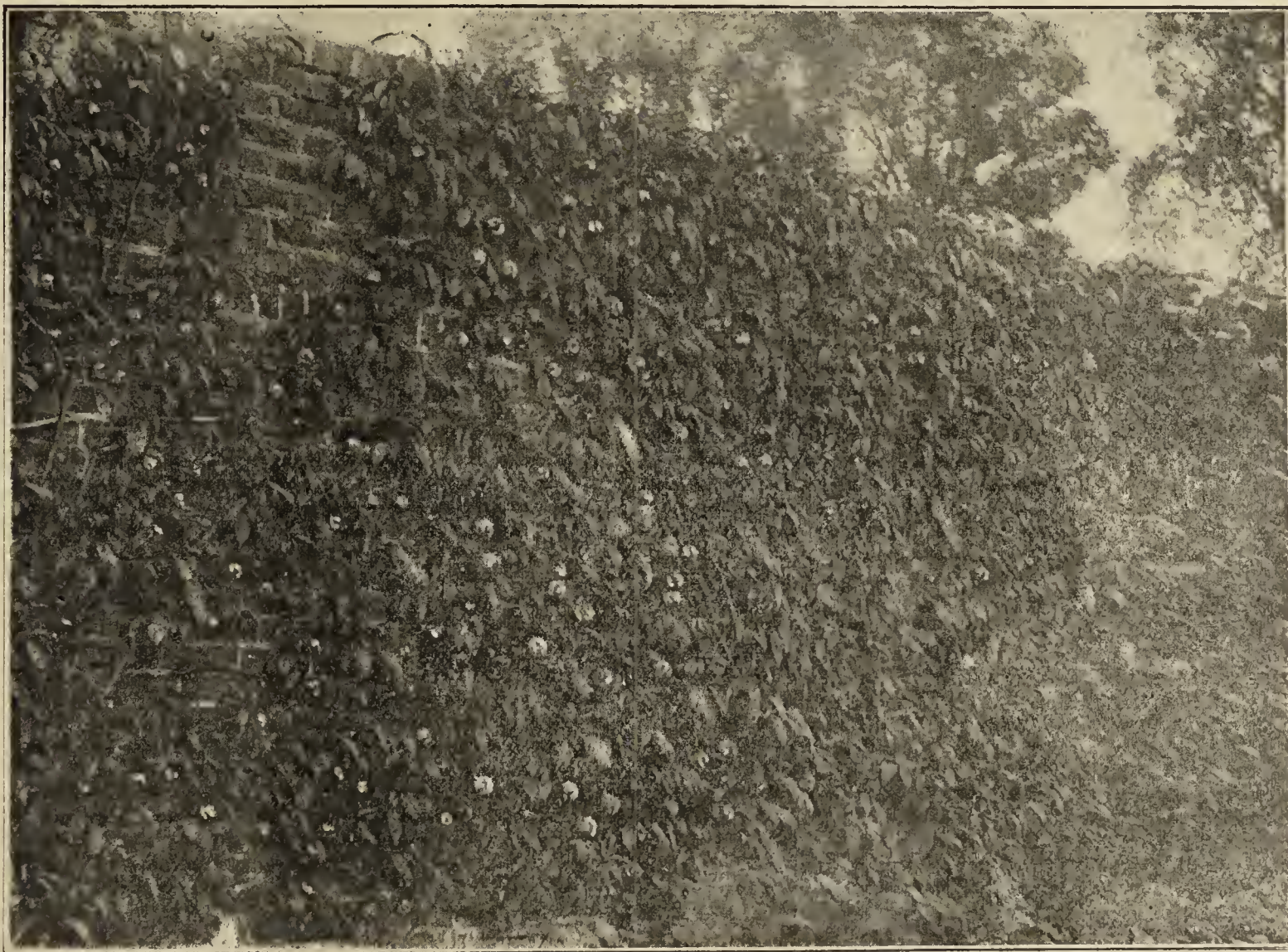
There were twelve exhibits in the class for two bunches of Gros Colman or Gros Maroc Grape. The first prize, £2, was annexed by Mr. W. Shingler, gardener to Lord Hastings, for splendid examples of Gros Maroc, the large bunches of fine berries carrying an exquisite bloom; the second prize going to Mr. T. Lambert, gardener to Lord Harlech, Brogyntyn, Oswestry; third, Mr. T. Jones, gardener to Mrs. F. Need, York House, Great Malvern, with excellent examples of Gros Maroc, altogether a well contested tournament.

In the class for three bunches of white Muscats, first prize £3, first honours were adjudged Mr W. Neild, Holmes Chapel, Cheshire, for splendid examples of Muscat of Alexandria; almost perfect in quality were the large and even berries. The second prize was secured by Mr. W. Coates, gardener to Colonel Platt, Gorddinog, Llanfairfechan, with well ripened, large, even sized berries of Foster's Seedling; and third Mr. T. Bannerman, for compact bunches of well ripened Muscat of Alexandria. There were two other exhibits in this class deserving of prizes.

For two bunches of white Grapes, Muscat of Alexandria excluded,

Sweetwater; second, Mr. C. Roberts, gardener to Mrs. Swann, Halston Hall, Oswestry, for the foregoing variety; third, Mr. W. Dawes, gardener to Lord Trevor, with Foster's Seedling. For two bunches of black Grapes Mr. J. Cock was responsible for the first prize in the class for two bunches of any kind of black Grape; second, Mr. W. Atwood; and third, Mr. A. Jones, gardener to George Latham, Esq. For two bunches of white Grapes Mr. W. Ashton was placed first with Muscat of Alexandria. Nectarines were very well exhibited, and Mr. Peter Blair, gardener to the Duke of Sutherland, Trentham Hall, Staffs, was placed first for an excellent dish of very large fruits of Stanwick Elruge; second, Mr. John Wilkes, gardener to Mrs. Meakin, Cresswell Hall, Staffs.

There was the large total of ninety-six Melons shown in the single dish class, and as every Melon had been tasted by the judges it accounted for the wide berth they gave to the dessert at the luncheon table afterwards. For a white flesh Melon the first prize was accorded Mr. W. L. Bastin, gardener to A. Henderson, Esq., Buscot Park, Berks, with an unnamed variety; second, Mr. W. Phillips, gardener to



PEACH GROSSE MIGNONNE. (See page 200.)

there were eight competitors, and Mr. A. Child, gardener to H. A. Attenborough, Esq., Catesby House, Daventry, ran away with the first prize for large bunches and berries of well ripened Buckland Sweetwater, and third Mr. B. Ashton, gardener to the Earl of Lathom, Ormskirk; second to Mr. W. Coates. For two bunches of Black Hamburgh, open to the county of Salop only, Mr. G. Davies, gardener to Mrs. F. Alderson, Gannon Hall, Oswestry, with most creditable examples; second, Mr. J. Langley, gardener to the Rev. T. M. B. Owen, and third, Mr. W. Dawes, gardener to Lord Trevor. For two bunches of black Grapes, any other variety, that veteran grower, Mr. S. Bremmell, gardener to H. H. France Hayhurst, Esq., was first with very large and excellent bunches of Black Alicante; second, Mr. T. Lambert, gardener to Lord Harlech, with Madresfield Court; third, Mr. G. Davies, gardener to Mrs. F. Alderson, with the same variety.

For two bunches white Muscats the first prize fell to Mr. Washwood, gardener to R. A. Newell, Esq., Admaston, for very good examples of Muscat of Alexandria; second, Mr. T. Lambert; and third, Mr. James Mills, gardener to Captain Heywood-Lonsdale, Shavington Hall, Market Drayton. For two bunches any other white Grape Mr. B. Lawley, gardener to Mrs. Darby, Adcote Hall, first with Buckland

T. F. Kynnersley, Esq.; and third, Mr. J. Langley. For a green flesh Melon Mr. J. Langley was again first with Earl's Favourite; second, Mr. T. Bannerman with a beautifully netted, deep-fleshed variety named Castle Howard; third, Mr. W. Phillips with a luscious-looking variety. There were several fine dishes of Plums. Mr. Goodacre was placed first in the class for twelve fruits of Gage Plums, the variety being Transparent Gage; second, Mr. R. Giindrod with Kirke's; and third, Mr. J. Jones, gardener to A. Henderson, Esq., with the same variety. For a dish of yellow Plums Mr. J. Langley was given the first prize, and the second Mr. McIndoe.

For a dish of purple Plums Mr. J. Langley was first with fine fruits of Prince Engleheart; second, Mr. Goodacre, with Kirke's; third, Mr. J. Jones, with same variety. For a dish of red Plums Mr. James Farrant was to the front; second, Mr. J. McIndoe; and third, Mr. S. Bremmell. Cherries were very well represented, in every case by Morello, excepting a dish of Archduke, which secured the first prize for Mr. W. Shingler; second, Mr. G. Gilbert, gardener to Captain T. A. M. Dicken, Lippington House, Wem; third, Mr. A. Ruddick, gardener to G. A. Young, Esq., Tan-y-Bryn, Bangor. There were several dishes of Apples and Pears, to which prizes were given.

Chippenham, August 21st.

The annual show of this flourishing society took place in beautiful weather on this date, and the attendance throughout the day was abnormally large. The entries and quality of the exhibits were equal to, or even above, the average in each of the several divisions—open, amateur, and cottager.

One of the finest features of the plant tents are the groups arranged on a space of 80 square feet. Here Mr. Perry, gardener to Captain Spicer, Spye Park, was the victor with an admirable exhibit of choice flowering and foliage plants, Orchids in variety, and *Lilium auratum* figuring conspicuously; Mr. Bible, gardener to H.H. Prince Hatzfeldt, Draycot House, coming second, brightly coloured Crotons providing one of his strongest features; Messrs. E. S. Cole & Son, Bath, were third. For six *Fuchsias*, Mr. Geo. Tucker, Hilperton, took up his usual position with the best, and admirably grown, specimens; Messrs. Pocock, Trowbridge, and Applegate, Bradford-on-Avon, following. Messrs. Tucker, Applegate, and Lawes were awarded the prizes for six specimen flowering plants in the order of their names, the first named being exceptionally good. Six Ferns made an excellent feature, the plants being large, well grown, and of choice variety; Mr. Mitchell took first, Mr. Tucker second, and Mr. Perry third. With a single specimen Mr. Tucker won easily, and he was also successful with six *Begonias* and six Zonal *Pelargoniums*. Messrs. Cole & Son took first for three Palms and for table decoration of flowers, 6 feet by 4 feet; Messrs. Garaway, Bath, and Mrs. Woodland, Frome, being the other competitors.

In the out flower section of the show there was a keen competition among district and distant growers. Roses in thirty-six varieties were well staged by Messrs. A. A. Walters and F. Hooper, Bath; the best twenty-four being shown by Messrs. Jefferies & Sons, Cirencester. Messrs. Cray & Sons, Frome, followed up their earlier successes with Dahlias by taking first for twenty-four Show and Fancy, twelve varieties of Pompons and twelve *Cactus* varieties in triplets, Messrs. G. Humphries, Chippenham, and J. Walker, Thame, taking the remaining prizes in each class. The awards for Asters went mostly to the Bath growers, Messrs. Walters, Hooper, and Newman, Colonel Neeld, and the Rev. A. B. Myons. Mr. Humphries won again with *Gladioli*, herbaceous *Phloxes*, and twelve bunches of Zonal *Pelargonium* blooms, Messrs. J. Walker, F. Hooper, and S. Hudd following. Herbaceous flowers made a large show, Messrs. Lewes and Walters securing the principal prizes, extra awards being given to Messrs. Eames and Porter.

With fruit there was a spirited competition, both in the open and district classes. Mr. Strugnell, Rood Ashton, took the lead with a collection of eight dishes, Mr. A. Jones, Bath, second, and Mr. Perry, Spye Park, third; there were four entries in this class. Grapes, two bunches each of black and white, were represented by several competitors; Mr. H. Jones and Mr. Strugnell won with black, Mr. Bertodans, Malmesbury, and Mr. Perry scored with white, Mrs. Harris, Calne, being third in both classes. Peaches were large, numerous, and fine in colour, Messrs. Cray & Sons and Mr. Strugnell winning, Mr. Perry being the only exhibitor of Nectarines. Colonels Neeld and Vivian staged the finest Cherries, Mrs. Fisher, Batherston, the best dessert and cooking Apples, three dishes of each. Messrs. Garaway, Porter, and Bible were the winners with a collection of vegetables in nine varieties.

In the district section the schedule provided for a much more liberal assortment, embracing plants, fruits, vegetables, and flowers, many of the same exhibitors taking part in the contest for rivalry as that appearing in the open classes. The district, however, comprises a large area, including Calne, famous for its bacon, so that the extent of the exhibition is by no means limited, nor the nature of the exhibits wanting in quality. Mr. Perry, Mr. Bible, the Messrs. Harris of Calne, Miss Ashe, Colonel Neeld, Mr. H. Coventry, Rev. A. B. Myons, and Mr. Humphries are a few names that occur among the successful ones frequently repeated in the classes for plants, flowers, vegetables, and fruit. The show is held in the beautiful grounds of Hardenhish Park, which are so well adapted to the purpose, though unfortunately situated at some distance from the railway station.—W. S.

Shirley, Milbrook, and Freemantle, August 21st.

The thirty-sixth annual show of this society was held on Wednesday, August 21st, in the beautiful grounds of Whithedwood Park, by the kind permission of Geo. Harris, Esq. The exhibits were staged in two large marquees. Mr. W. R. Denness most ably carried out the duties of secretary, assisted by a good working committee, which included several F.R.H.S. The band of the 3rd V.B. Hants Regiment gave a capital programme of music during the afternoon and evening. In the large tent there was a grand display of flowering and foliage plants from the nurseries of Messrs. B. Ladhams, Ltd. Messrs. Toogood & Son showed a fine lot of fruit, flowers, and vegetables from their trial grounds, and Messrs. Roger & Son of Red Lodge Nurseries staged a fine lot of foliage and flowering plants; all the above received a certificate of merit for their exhibits. Other exhibitors who contributed to the show, and helped to make it such a success, were Messrs. Wills, The Nurseries, Winchester Road; J. W. Fleming, Esq., J.P., Chilworth Manor; Col. Sinkins, Andrew Barlow (president), General Nesbitt, and Lady Ashburton. The duties of judging were carried out by Messrs. Avery, Curtis, Hill, and Ransom. The following is a list of their awards.

For miscellaneous plants.—First, Miss Todd, Shirley (gardener, Mr. W. Peel); second, Lady Ashburton (gardener, Mr. G. Hall); third, Mr. E. Wills. Group, 100 square feet.—First, Mr. E. Wills; second, Miss Todd. Collection *Pelargoniums*.—First, Messrs. B. Ladhams; second, Mr. A. Maple. Foliage *Begonias*.—First, Mr. E. Wills; second, Gen. Nesbitt (gardener, Mr. J. Biggs). Six plants table decoration.—First, Lady Ashburton; second, Miss Todd; third, Mr. E. Wills. Six Ferns.—First, Lady Ashburton; second, Miss Todd; third, Mr. A. Maple. Six Balsams.—First, Lady Ashburton. Six *Begonias*.—First, J. Willis Fleming, Esq., J.P. (gardener, Mr. W. Mitchell); second, Mr. F. Haddon; third, Mr. A. Maple. Six Cockscombs.—First, Lady Ashburton; second, Colonel Sinkins (gardener, Mr. E. J. Wilcox). Six *Coleus*.—First, Gen. Nesbitt; second, Mr. A. Maple; third, Mr. F. Cozens. Six *Celosia*.—First, Lady Ashburton; second, Mr. J. W. Fleming; third, Miss Todd. Specimen plant.—First, Lady Ashburton; second, Mr. E. Wills; third, Miss Todd. Collection of cut flowers, twelve distinct kinds.—First, Miss Todd; second, Lady Ashburton. Wedding bouquets.—First, Miss L. Wills; second, Messrs. B. Ladhams; third, Messrs. Longster & Son. Buttonholes.—First, Mr. R. H. Jeffery; second, Mr. B. Ladhams; third, Mr. F. Vardy. Twelve out Roses.—First, Messrs. Longster & Son; second, Mr. J. W. Fleming. Dahlias, Show.—First, Mr. J. Miller; second, Mr. F. Cozens; third, Mr. E. Edwards. *Cactus* ditto.—First, Mr. F. Cozens; second, Mr. E. Rogers; third, Mr. J. Miller. Single ditto.—First, Mr. J. Stratton; second, Mr. W. H. Shepherd. Pompon ditto.—First, Mr. F. Cozens; second, Messrs. Longster & Son; third, Col. Sinkins, J.P. Twelve hardy garden flowers.—First, Mr. B. Ladhams; second, Lady Ashburton; third, Mr. F. M. Nokes. Open to ladies only, *epergne*.—First, Miss F. Wills; second, Mrs. Jeffery. Ditto wild flowers and grasses.—First, Mrs. Jeffery. Ball bouquet.—First, Miss F. Wills; second, Miss B. Ladhams. Shoulder sprays.—First, Mrs. Longster; second, Mrs. Jeffery; third, Mrs. Ladhams. Fruit, two bunches of black Grapes.—First, Mr. J. W. Fleming; second, A. H. Cobbold, Esq. (gardener, Mr. F. Snelgrove); third, Lady Ashburton. Two white ditto.—First, Mr. J. W. Fleming. Six Peaches.—First, Mr. J. W. Fleming; second, J. Forbes Bassett, Esq. (gardener, Mr. J. Morant); third, Gen. Nesbitt. Twelve dessert Pears.—First, Messrs. Longster & Son; second, Gen. Nesbitt; third, Col. Sinkins. Twelve dessert Apples.—First, Messrs. Longster & Son; second, Mr. F. Cozens; third, Mr. J. W. Fleming. Twelve kitchen ditto.—First, Mr. G. Payne; second, Mr. J. W. Fleming; third, Mr. E. Wills. Melon.—First, Lady Ashburton. Six dishes of fruit.—First, Mr. J. W. Fleming; second, Lady Ashburton. Four dishes ditto.—First, Gen. Nesbitt; second, Col. Sinkins. In the cottagers' class the principal prizewinners were Messrs. G. Avery, Tilliper, Cozens, Loader, and Minch. Mr. Avery has exhibited at this show since its commencement, also other shows held in the neighborhood. He has held the position of postman for the Shirley district for thirty-five years, and now retires on a well earned pension.—J. M.

Kingswood, August 21st.

The Kingswood shows of the past gave rise to envy on the part of less favoured and wealthy societies of the West of England, by the reason of the liberality of the prize schedule and the extraordinary patronage accorded, both in the matter of special prizes and the large attendance. No less than three 6-guinea silver cups were given annually by residential patrons, but from some reason unexplained this great and enthusiastic body was allowed to lapse, and a gap in the brilliant pages of history gave rise to unmixed feelings of regret among the many who paid their annual respects to the flourishing boot-manufacturing township of Kingswood. Apparently not satisfied with the lapse of the old society, a new body has been instituted to carry on a flower show, with Mr. Tubody as their secretary, and though on a greatly modified scale, it is hoped that in due course the prize value will rise as the funds increase wherewith to provide it. In no respect could the present exhibition compare with those of former times, the absence of many redoubtable exhibitors of plants and fruit telling adversely when comparisons were made with shows of the past.

In the open to all tents there were some commendable exhibits, not the least being that of Capt. Belfield, whose gardener, Mr. Rye, has been the victor of many a hard fought battle, and has carried off a goodly share of the valuable silver cups of past days. His trained flowering plants were models of good culture on this occasion, fresh, well trained, fully flowered, and healthy. *Bougainvillea Sanderiana* was especially fine, as also were his *Allamanda nobilis*, *Stephanotis floribunda*, and *Rondeletia speciosa major*. Messrs. J. B. Wood and Son, Chipping Sodbury, took second, and Mr. Towell, gardener to Mrs. Gale Coles, Frenchay, third. Messrs. Wood were given the first prize for six foliage plants, though there were more even merit in Mr. Rye's collection; Messrs. Cole & Son took third. Mr. Rye was again first for six beautiful Ferns, though on this occasion Capt. Belfield was not represented by his *Todæas*, with which his name is so familiar and well known. Groups occupying a space of 60 feet brought four competitors of very even merit, Messrs. Cole & Son, Bath, being first, Mr. Towell and Mr. Rye following closely. *Begonias*, *Gloxinias*, *Fuchsias*, Zonal *Pelargoniums*, &c., added to the furnishing of the plant tent.

Cut flowers in the several classes lent a brightness to the side stages, the hardy herbaceous being very fine. With these Messrs. Stokes and Son, Trowbridge, came in first; Mr. Walters, Bath, second; and Mr.

Towell third. Messrs. Walters, Haskins, Garaway, and Newman won all the prizes for Asters; Mr. Thos. Hobbs of Bristol carrying off the first prize for double and Cactus Dahlias, and for eighteen and twelve Roses. Sweet Peas in bunches were beautifully staged by Mr. J. A. Waller in twelve varieties, Messrs. Stokes & Son being second. Hollyhocks in twelve varieties were well shown in the open and amateur classes, and were equally as interesting as other florists' flowers.

Fruit was not extensively exhibited, though some dishes were of conspicuous merit. Mrs. E. Jefferies' gardener brought some excellent Black Hamburgh Grapes, Messrs. Harford and Waller, too, having the same variety well grown. Mr. Curtis, gardener to W. H. Davis, Esq., Bristol, had the best white Grapes; Mr. Towell and Mr. Bryant, gardener to Dr. C. J. Perrott, being second and third respectively. Mr. Hall, Bath, took the first prize for Plums, Green Gages, and dessert Apples. Mr. J. E. Head, Hanham, staged the finest dish of Ecklinvilles we have seen this season, and was an easy first in a keenly contested class.

Vegetables displayed none of the ill effects of the summer's drought, but were staged in quantity and of the highest quality. Cauliflowers, Potatoes, Runner Beans, Tomatoes, Peas, Marrows, Celery, Cucumbers, Parsnips, Leeks, and Onions were fine, and were mostly from local growers.

The keenest contests probably were found in the ladies' classes for vases and table decorations. In the latter the schedule required that general effect and arrangement be a prior condition in judging. In the decorated tables there were a dozen entrants, Mrs. Bennett taking first with a pretty blend of blue and white, the pale blue being Delphinium Belladonna. Miss Cole, Bath, was second, in which Orchids largely preponderated, but there was a distinct absence of greenery, which detracted from what would otherwise have been an effective table. Miss A. Johnson was third. Miss Cole won with a vase of flowers, Mrs. Curtis second, Miss Williams third.

Messrs. Isaac House & Son, Westbury-on-Trym, made a large honorary exhibit of hardy flowers, Phloxes, Pentstemons, Delphiniums, all named, and exceedingly fine in colour, and blossom being effectively displayed; among other useful hardy flowers Delphinium Belladonna, a pale blue flower of large size, was greatly admired, and is sure to be much sought after, both on account of its delightful colour and the continuous flowering habit of the variety. This collection of hardy flowers was quite a feature, and found many admirers among the crowd of visitors.—W.

R.H.S. of Perthshire, August 22nd, 23rd, 24th.

The annual show of this old society was held in two large marquees erected on the North Inch last Thursday, Friday, and Saturday. Compared with former years there seemed to be a slight falling off in the numbers of specimen plants staged, which, to a certain extent, hurt the general appearance of the show. On the other hand, cut flowers were staged in extra quantity, and clean and bright in colour.

Groups (circular) and tables of plants were a feature of the show, and in both instances the premier award was secured by Mr. John Leslie, Pitcullen, with very tasteful arrangements of foliage and flowering plants, comprising Palms, Dracænas, Cotons beautifully coloured; Liliums, Cannas, Acalypha Sanderiana, &c., being judiciously intermixed with them, made a very pleasing combination, Messrs. Harley following with a very tidy group, while Mr. T. Dobbin, Balhousie Castle, securing second for the table with a highly creditable exhibit just a little deficient in colour.

Several magnificent wreaths were shown, Miss B. C. Kidd, florist, High Street, Perth, gaining the premier award with a tasteful arrangement composed chiefly of white Liliums, Chrysanthemums, and Sweet Peas; Messrs. Harley, Vinehill, were second, and Mr. Wm. Farquharson, nurseryman, third. Sprays and buttonholes were well staged, the winners being Messrs. Harley, Farquharson, and Miss Kidd. For brides' bouquets, Messrs. Harley and Farquharson shared honours. For stove or greenhouse trusses Mr. Leslie was the only exhibitor, staging very well.

For a display of cut flowers on a table 15 feet by 3, Miss B. C. Kidd had an exceedingly handsome exhibit, composed chiefly of Sweet Peas in various colours, intermixed with Gypsophila paniculata, with trails of Smilax on the cloth. The whole had a graceful and artistic appearance, and was greatly admired. Sweet Peas were a splendid exhibit, no fewer than 240 bunches being staged in two entries, Mr. J. H. Cumming, Grantully, securing the silver medal with a capital exhibit, arranged with sprays of Gypsophila; eleven entries. In the other class there were nine competitors, Mr. James Harris, Greenbank, securing the coveted award. Excellent blooms of single and double Begonias secured the premier award for the same exhibitor. Roses were good for this season, Mr. Harper, Tullibelt, having the best out of seven entries. Dahlias, especially Pompon and Cactus, were very bright. Twelve bunches of annuals brought out a number of competitors, Mr. Joseph McFarlane, Kilgraston, winning easily. Fourteen dozens of Asters were staged, and some excellent blooms were shown, Messrs. McFarlane and Harris securing leading positions.

Fruit.

This was better shown than it has been for a number of years. Collection of eight kinds was won by Mr. Leslie with fair bunches of Hamburgh and Muscat Grapes, splendid Peaches and Nectarines, fair

dishes of Figs, Green Gages and Apples, and a small Melon. For one Melon Messrs. Adam, Harper, and Cumming secured the awards in the order named. For six Peaches and six Nectarines Mr. Leslie led the way with large beautifully coloured fruit of Royal George and Lord Napier respectively. Two bunches black Grapes brought out four entries, Messrs. Bain, Leslie, and Dobbin winning in the order named. For one bunch black Mr. Leslie secured first with a handsome bunch of Madresfield Court fairly well coloured, Messrs. Bain and Cumming following with Hamburghs, lacking finish. Two bunches of Muscats secured Mr. Leslie the first place in the class for a pair of whites. For a single bunch Mr. Leslie again led, followed by Messrs. Cumming and Dobbin.

For twelve table Apples there were seven entries, Messrs. Younger, McFarlane, and Dobbin having the winning lots. Eleven competitors staged in the class for twelve kitchen Apples, Messrs. Ramsay, McFarlane, and Younger securing the awards. Large handsome fruits of Jargonelle secured for Mr. Younger the premier award for Pears out of seven entries. Mr. Harper led in the class for twelve dessert Plums with fine fruit of Kirke's, and in the corresponding class for kitchen sorts Mr. McFarlane led with Magnum Bonum, there being five and eight entries respectively. For a collection of hardy fruit, eight varieties, there were only two entries, Mr. Harper winning easily with a nice lot.

Vegetables.

As usual, vegetables were good, Mr. Harper again winning with a very meritorious lot, comprising good Celery Standard Bearer, Leeks Dobbie's International Prize, Onions Cranston's Excelsior, Cauliflower Autumn Giant, Moore's Cream Marrow, Peas Sutton's Peerless Marrowfat, Tomato Stirling Castle, Carrot Sutton's Intermediate, Canadian Wonder Kidney Beans, and Duke of York Potato. Mr. James Joss, Hattonburn, secured second place. Onions were largely shown. Out of twelve lots Mr. Younger, Meigle, won with huge bulbs. There were sixteen entries for Potatoes, Mr. McFarlane leading the way. Tomatoes brought out eight entries, Mr. Harper winning with Stirling Castle.

Miscellaneous Exhibits.

Mr. Farquharson, florist, had a beautiful table of cut flowers from the open, prominent amongst them being Montbretias aurea, Phare, Rayon d'Or, and crocosmæflora, Helianthus Soleil d'Or and multiflorus, a fine lot of Sweet Peas, and double and single Begonias.

Messrs. Dickson & Turnbull showed a table of seedling Begonias backed with Palms, Aspidistras, and Ferns.

A large show of amateurs' products was displayed in the adjoining marquee, where a very creditable display was made.

The show was opened at one o'clock on Thursday afternoon by Lord Provost McGregor in presence of a large and fashionable assemblage. Mr. Alfred W. Brown, the energetic secretary, and the committee of management, were most assiduous in their efforts to make the show a success, and are to be congratulated on the great success which was the result of their labours.—W. L., Ballenarick.

Rock Ferry, August 23rd.

One hundred pounds to allotment holders. Such was the splendid gift of this the first show of the newly formed Rock Ferry Horticultural Association. Nor was this all, for the professional classes were fully catered for, consequently the attendance represented all the leading families of the Liverpool district, the subscribers alone insuring the success for many years to come.

St. Peter's Hall, where the show was held, was not by any means an ideal place, nor did it show exhibits to the best advantage, the main hall being fully occupied, in addition to the balcony, two anterooms, and a splendid marquee, in which the holders of allotments staged much remarkable produce. The principal prize of the show was the miscellaneous group class, and here Mr. H. Ogden of West Derby essayed the somewhat difficult class of crossing the River Mersey to reap a well-deserved reward, in which elegance and perfectly grown plants were fully to the fore. Mr. R. Roberts, gardener to G. C. Paton, Esq., The Poplars, was second, but the flat arrangement militated from the general effect.

The group for amateurs brought out much good work, but there was nothing to approach that staged by Mr. Stokes, gardener to J. H. Kenion, Esq., The Bedfords. A Palm surmounting the centre, excellent foliage plants judiciously interspersed with yellow Oncidiums in abundance, left nothing to be desired. Mr. J. Bryan, gardener to E. F. Peel, Esq., was a moderate second. The latter gentleman scored a decisive victory for four Fuchsias, four stove or greenhouse plants, also with Latania borbonica as a single foliage plant. Mr. J. Bradshaw had the best two Begonias and a fine exotic Fern. Three splendid Coleuses came from J. H. Kenion, Esq.

Cut flowers made an imposing display, a floral arrangement 4 feet by 2 feet being secured by Mr. Henry Ogden with Sweet Peas, tasteful to a degree. Mr. John Lea had a grand twelve bunches of outdoor flowers, set up to the best advantage. An open class for a collection of Carnations and Picotees was quite a triumph for Mr. C. A. Young, of the Floral Nursery, West Derby, the whole stand consisting of own seedlings, in which many extra good sorts were noticed. The same exhibitor had a gorgeous display of Cactus Dahlias, beautifully arranged in stands of Bamboos.

For twelve Roses Mr. Little, gardener to G. H. Pilkington, Esq., Wheathill, Roby, came a capital first, Caroline Testout, Madame Hoste, Madame Lambard, Marquise Litta, and Jeannie Dickson being especially fine. Mr. Irvine, gardener to P. C. D. Castle, Esq., won with six. The table decorations for ladies only were remarkable for good taste, not a faulty one to be seen, Miss Kendall taking a by no means easy victory.

FRUIT.—The highest praise would not be grudged the exhibitors in this class, every dish being of the best. The class for six dishes went to Mr. Ferguson, gardener to Mrs. Paterson, Rock Ferry, with fine Hamburgs and Muscats, Dr. Hogg Peaches, Pineapple Nectarines, Doyenné d'Été Pears, and Green Gage Plums. Mr. Irvine was a very good second, and won with extra choice dishes of hardy fruits. Mr. A. Crisp, gardener to W. P. Richards, Esq., won with Black Hamburgs, the classes for Black Hamburgs, Madresfield Court, and Muscat of Alexandria going to Mr. J. Richards with handsome examples. A perfect dish of Bellegarde Peaches came from Mr. Crisp, and good Elrge Nectarines from Mr. Morgan, gardener to M. Harvey, Esq. Melons were a great competition, the winners being Mr. T. Tinte, gardener to T. W. Oakshott, Esq., and Mr. Irvine. Plums were excellent, Mr. Morgan and Mr. Bryan being the winners.

A large room was devoted entirely to vegetables, Mr. G. Taylor, Little Sutton, staging the best nine, noticeable being fine Carrots, Beet, Potatoes, and Onions. Mr. Irvine had the second position, and Mr. D. McLean, gardener to Mrs. Kendall, Lancelyn, Rock Ferry, the smartest six. Grand Celery and Onions and Potatoes came from Mr. J. Williams. Splendid Tomatoes came from Mr. Millington, and superb Carrots from Mr. J. R. Carter, Langhall Mill. The Rev. W. L. Paige Cox, Vicar of Rock Ferry (chairman), and Messrs. J. P. Moffat and W. J. Little, did huge work in connection with this first show with its large number of exhibits.—R. P. R.

Newton and Earlstown, August 24th.

The fifteenth annual exhibition was held in a most suitable park, kindly lent by Mr. John Randall. In the group class Mr. F. Woods, gardener to Mrs. Smith, had a special arrangement, consisting principally of handsome foliage plants, used to the greatest possible advantage, and quite the feature of the show. A good second was arranged by Mr. T. Foden. Mr. Foden quite superseded all others for six Begonias, three Coleus, and six Zonal Pelargoniums. Mr. R. Barton staged the finest three greenhouse plants, a good plant of Vallota purpurea being the most prominent. There were many classes of Ferns shown, an undoubted win coming from Mr. R. Newport in the class for British Ferns, the exotic class being taken by Mr. Barton with excellent *Adiantum cuneatum* and *gracillimum*.

Many choice dishes of fruit were staged, and here again for six dishes Mr. Woods came well to the fore, Mr. Foden being a fair second. The same exhibitors won respectively for Muscat of Alexandria and Black Hamburg Grapes. Vegetables were throughout of extra good quality, Mr. W. Sephton for twelve kinds staging Veitch's Marrow, Perfection Celery and Leeks, Autumn Giant Cauliflower, Model Carrot, Ailsa Craig Onion, Gladstone Pea, Polegate Tomato, Special Potato, Dobbie's Purple Beet, and Best of All Bean. Fidler's Royal Standard, Reading Russet, Goldfinder, Vicar of Laleham, International, and Perfection Potatoes were the leading six kinds from Mr. Sephton, who also won easily for three sticks of Celery and the best Runners, Mr. Woods having a superior lot of Onions.—R. P. R.

Shirley and District Gardeners' Association.

On Monday evening the members held a meeting at the Parish Room, Shirley, when a goodly number of exhibits were staged, a great novelty being a St. Joseph Strawberry from the grounds of Col. Sinkins, J.P. (gardener, Mr. Wilcox). The same exhibitor also staged a splendid collection of twenty-six varieties of annuals, which received from the judges a VHC. G. P. Perkins, Esq., J.P. (gardener, Mr. Todridge), sent a collection of fruit and vegetables. Messrs. B. Ladhams as usual sent a grand collection of herbaceous blooms, which was very highly commended. Mr. B. Ladhams, F.R.H.S., in the absence of the president, took the chair, and the secretary, Mr. J. Miles, having read the minutes and some correspondence regarding the outing of the society, stated that arrangements had been made to visit the nurseries of Messrs. James Veitch & Sons at Coombe Wood on September 4th. The chairman explained that this was an open night for discussion, and he called on the hon. sec., who had produced two pieces of wood, one cut from an Elm and the other from a Jargonelle Pear tree, both having been bored by the caterpillar of the Wood Leopard moth, which is most destructive to fruit trees. Mr. Miles gave instances of fruit, Elm, and Poplar trees having been killed by these boring caterpillars; he also read a paper issued from the Board of Agriculture Department on these destructive insects. Mr. Wilcox next described his treatment of the St. Joseph Strawberry which he exhibited. The plant was grown from a runner last year, and, as they saw, it bore a very nice crop of fruit after all other Strawberries had finished. His plan was to cut off all runners and bloom up to the end of June; by doing so he was able to pick a dish of fruit every day. The greatest enemy to the fruits at this time of year was the wasps. A good discussion took place on the best method of destroying this pest, the secretary saying that one of the best was cyanide of potassium; Mr. J. Jones said he used a squib made of gunpowder; some thought sulphur the safest, as cyanide of

potassium was a most deadly poison, and required very careful using. Red spider was next touched upon. Here, again, cyanide was recommended by some, others thought softsoap best, while some said paraffin was a good insecticide. Mr. Greenslade spoke of the great value of these open nights to the members of the society, and trusted that in making up the next six-month programme there would be one or two nights set apart for this purpose. A vote of thanks to the chairman and exhibitors closed a very instructive and entertaining evening.—J. M.

Young Gardeners' Domain.

Hints for Young Heads.

DEAR and worthy kingdom of Bothydom! "Where'er I roam, whatever realms I see, my heart, untravell'd, fondly turns to thee." If, under the above heading, "An Old Boy" can keep in touch with it, then will he have his heart's desire. To do so, our lines of communication must, of necessity, run on fresh ground, and in the doing lies the danger of poaching on other men's preserves, for what was hitherto advanced was more in direct relation to the worker than his work, and that was for the bothy and winter nights. In bringing the work—the great work—to the front, summer days will prove a more convenient season, and this is for the garden. "A summer's day; all work and no play," says some young fellow. Possibly so, young friend, but I do not pity you; sympathise with you I do. To help you shall be my endeavour—endeavour to bring inspiration into "the common round, the daily task," that the longest and hardest day's work may resolve itself into a labour of love.

Now for the poaching part. Head gardeners, as a rule, are liberal minded men, apt to look at all sides of a question, when they have time to do so, otherwise even they, from misjudged motives, may draw wrong conclusions. Possibly some old "head" may say, "Oh! it's not your business to teach my chaps how to do their work." That is admitted, for, according to Theodore Hook, what is a pleasure is not a business. But far above and beyond the pleasure of preaching and teaching in bothydom lies the intuitive feeling that trying to help our boys has, somehow, grown to be my mission in life, and any opportunity that offers, or any excuse that can be made to do so, is readily availed of. They must, perforce, do as they are told, that is the letter of the law; if the spirit of it can be inculcated, then, surely, it will benefit all concerned. Amidst all phases of life in the world of work young gardeners rank high for intelligence and common sense, hence they will readily understand that anything promulgated here, whilst being, it is hoped, of advantage to them now, may not be fully available till hereafter, when freedom of thought and action will enable them to sift all men's methods, and adapt the fittest to their own particular circumstances. Should this apologetic preliminary hint to old "heads" not cover all the ground which in due course may be entrenched upon, then, please, forgive me my trespasses.

Stove Plants.

To a lad keenly interested in his work probably a greater fascination is to be found in the cultivation of tropical plants than in any other phase of gardening; and, once and for all, with lads not keenly interested in their work I have nothing to do—to them, nothing to say. Plant stoves are generally fed from the propagating pit, which may take but the simple form of a frame fixed on the pipes of the stove house proper, where a brisk bottom heat of 85° to 90° is maintained from early spring to midsummer. The propagating pit, preferentially a low span-roofed house with bottom heat always at command, containing the aforesaid frame or hand-lights for cuttings, is a splendid nursery for giving the young plants a good start in life. As a hospital for the restoration of the debilitated, or rejuvenation of the aged after cutting back and shaking out, it is unsurpassed. So essential is the propagating pit felt to be as an adjunct to the stove proper, that one would advise our young "head," who, on taking his first command, finds it is the one thing wanting, to use the opportunity so often afforded to the new man of obtaining it. This, of course, where tropical plants are not only appreciated but in constant demand as decorative subjects.

"Oh! You'll never get it; the last gardener sickened 'em with his wants and woes," was the consolation (?) given to a young friend by a critical acquaintance when a similar matter was under discussion. Our young "head," however, thought the matter out, saw what could be done and how it could be done; went, in fact, into the whole question of ways and means, waited for an auspicious moment (there's a time for everything) to broach the subject, and so clearly explained the details with well-drawn plans that victory was secured on the spot. This shunting on to side tracks off our main line of thought may, perhaps, be excused, for in a hasty rush to reach the terminus young travellers would miss much that is helpful on life's journey. The propagating pit with its bottom-heat bed of plunging material, cocoa

fibre for preference, is a quick and certain kill or cure settlement of such plants as are constitutionally unfit for the plant stove, and than which nothing detracts more from its interest than those things not quite bad enough to throw out and hardly good enough to keep. For rearing young stock it is the place *par excellence*. A constant bottom heat of 90°, with an atmospheric temperature of 70° by night and 80° by day during the early months of the year, with top ventilation as occasion requires to keep the latter from rising above that, is the heat I like to maintain, as giving the quickest and best all-round results.

All potting operations connected with the propagating pit are best performed inside it by the use of a portable wooden tray, and too much care can hardly be given to the preparation of the soil, as it plays a very important rôle in the good start. A close-textured peat and fibrous loam in equal proportions will be found generally suitable for all sorts and conditions of plants under notice. Circumstances may, of course, alter this case, as they do all cases, and keen observation will do more towards success than any hard and fast lines can ever do, which, indeed, applies to all phases of culture. After roughly chopping up the turves of either material, the whole should be broken by hand into pieces the size of a walnut or larger, discarding all fine material. Given a liberal addition of charcoal the size of hazel nuts, with sharp sand, and a handful of Clay's fertiliser to the bushel of soil, we have an ideal compost for all purposes in the propagating pit, save, of course, for cutting pots, for which some of the fine material with additional sand is well adapted. With the addition of chopped sphagnum the mixture as prescribed is unsurpassed for Caladiums, Alocasias, and others of that ilk.—AN OLD BOY.

(To be continued.)

Wood Leopard Moth.

FROM the end of June to the commencement of August, according to the temperature of the season, may be found clinging to trees, especially the Lime, that beautiful insect the wood leopard moth (*Zenzero æsculi* of some, and *Bombyx* or *Cossus æsculi* of others).



WOOD LEOPARD MOTH.

Its specific name, from *Æsculus*, a Horse Chestnut, is singularly inapplicable, as it frequents that tree less than any other. It is white, covered with bluish-black spots, as represented in our drawing; the antennæ short, very feathery at the lower half, tapering to a fine point. The female is full twice as large as the male, often measuring

nearly 3 inches across the expanded fore-wings. She is furnished with a long ovipositor, or egg depositor, admirably adapted for inserting her eggs in the cracks of the bark of trees, on the wood of which the caterpillar feeds. To the Pear, Apple, Hazel, Walnut, Elm, Lime, and other trees it is most destructive, burrowing holes into them, destroying their sap vessels, and forming reservoirs for wet to lodge in and promote decay. The caterpillar is white, tinged with yellow, and spotted with black; its head being horny, with black patches upon it, and on the segment of the body next to it. Its length is about 2 inches when full grown, being hatched in August, and attaining its full size in the June following. It then enters the pupa state, becoming a brownish yellow chrysalis, in a cocoon formed of the dust of the wood which, as a caterpillar, it gnawed down in working its passage. From this cocoon, as already stated, the moth comes forth, either at the end of June or some time between that and the beginning of August.

Next Week's Events.

Friday, August 30th.—Dumfries and Galloway Horticultural Society's Show.

Wednesday, Sept. 4th.—Glasgow and West of Scotland Horticultural Society's Fruit and Vegetable Show, including displays of fruits by Foreign Nations, States, &c. (two days).

Phenological Observations.

AUGUST 30TH TO SEPT. 5TH.		PLANTS DEDICATED TO EACH DAY.
30 Fri.	Red Bryony berries ripe.	Guernsey Lily.
31 Sat.	Peaches ripe.	Autumn Pheasant Eye.
1 Sun.	Clouded yellow butterfly seen.	Common Orpine.
2 Mon.	Chaffinch sings again.	Golden Rod.
3 Tu.	Meadow Saffron blooms.	Common Fleabane.
4 Wed.	Hawthorn berries ripe.	Common Soapwort.
5 Thr.	Lime leaves tinged yellow.	Common Mushroom.



Fruit Forcing.

Vines.—Early Forcing in Pots.—The canes for starting early in November to supply Grapes fit for table towards the close of March or early in April must not be allowed to become dust dry at the roots, for that impairs the vitality of the Vines, and may cause the incipient bunches to perish in the buds. Too much water is inimical to the tender roots, often causing them to decay; suffice that the soil be kept moderately moist. The Vines should now be at rest, the wood quite brown and firm, the buds round and plump, the laterals cut close to the cane, and this shortened to about 6 feet more or less, according to the situation of the sound buds and the width of trellis. Dress the cuts—the wounds only—with the best French polish, whilst they are dry, as a preventive of bleeding. The Vines should be kept in a cool airy house. If the canes have to be bought indoors orders should be given, so as to secure sturdy canes with plump buds of the desired varieties. The most suitable varieties for early forcing are White Frontignan, Foster's Seedling, and Black Hamburg.

Unsatisfactory Vines.—These may be improved by removing the soil down to the roots, picking it carefully from amongst them and supplying fresh loam, raising the roots where practicable, and laying them in new soil, especially the fibry ones and those proceeding from the collar. With the roots lifted, laid in fresh compost, and covered 3 or 4 inches deep, the Vines generally form abundance of fibrous roots in the new material, and become almost independent of the large roots, which are comparatively inactive through the lower part of the border having become effete. This is best done in advance of the leaves falling, and a gentle watering being given the roots will take to the new soil at once. Vines at rest must not be allowed to become very dry at the roots for the border to crack and part from the walls, causing the young roots to perish, and the soil is difficult to make thoroughly moist after it gets into a parched condition.

Young Vines.—Those having made a strong growth, and to be cut down to three plump buds from the bottom of the trellis to furnish a leader and side shoots, one on each side of the rod, another season, may be allowed to grow as long as they like, taking the precaution to keep the principal leaves that correspond to the pruning buds free of spray, so that that part of the cane may get thoroughly ripened. Vines, however, that are expected to do something more than this—"prove the variety"—next year should have further growth discouraged by the removal of the laterals as they appear, taking care to leave some growth as an outlet for the excess of sap, otherwise the pruning buds may be started. By this time the wood will be getting brown and hard, and the laterals may be gradually removed, cutting them back in the first instance to one joint, and in the course of ten days to a fortnight they may be cut away close to the cane, provided they have not pushed fresh growths; but if they start the buds, the growths must be pinched at the first leaf, and the removal of the laterals deferred to a later period. In this case the Vines should be assisted with fire heat, maintaining a minimum of 65°, and a maximum of 75°, until the wood is ripe, accompanied with free top and front ventilation.—ST. ALBANS.

The Kitchen Garden.

Spinach.—A sowing of Spinach should be made to stand the winter on a piece of good but firm ground. Break the soil moderately fine, and draw drills a foot apart, and 1 inch deep. Scatter the seeds regularly, and rather sparingly, covering them with fine material. A good breadth of drills should be prepared unless they are of good length, when fewer will suffice. When the plants come up, and are crowded, thin them continually as they touch one another. Only strong plants with hardy leaves will pass through the winter safely. The thinnings, however, after the plants have attained some size, may be used for cooking.

Turnips.—This is a very suitable time to sow a good bed of Turnips for use in winter and spring. Good varieties to sow now—Veitch's Red Globe, Chirk Castle Black Stone, Early Snowball, and All the Year Round. Sow on firm well-drained ground, preferably in drills, where the plants can be readily kept thinned, and the soil between the rows clear of weeds. Sow in shallow drills and thinly. Light and frequent dustings of soot and wood ashes will be extremely beneficial in assisting the early growth. Beds of Turnips sown a few weeks previously will require thinning.

Onions.—A last sowing of Tripoli varieties should be made. The Rocca varieties are useful, hardy, and make fine bulbs the following summer, but some of the popular varieties usually sown in spring may be tried, such as Ailsa Craig and James' Long Keeping. Sow moderately liberally, so as to admit of freely thinning out to replant in spring. Harvesting the present season's crop ought now to be

attended to. Pull up the bulbs on a dry day, and leave them for several days to fully ripen if the weather continues dry. Should wet weather occur they ought to be placed on mats, and carried under shelter when too damp to remain in the open. They must be stored in a dry condition and thinly in the coolest and driest structure possible. Warmth and damp impair their keeping qualities.

Lettuce.—The best Lettuces for autumn sowing are Winter White Cos, Black-seeded Bath Cos, Hammersmith Hardy Green, and All the Year Round. Should previous sowings made recently not be producing a fair number of plants, more seed should be sown without further delay, as it is important to secure a good bed of winter Lettuce. Seedlings advanced in size may be lifted, and planted out in rows 6 inches apart and 4 to 6 inches from plant to plant. Give a good watering in dry weather. It is better to plant in dull and moist weather, rather than when dry and sunny.

Endive is a useful winter salad plant, and when in demand a few rows ought to be sown now. The curled varieties are undoubtedly the best, of which the Winter Curled and the Moss Curled are excellent varieties. Sow in drills a foot apart, and thin the plants as they advance in size freely, well grown Endive plants needing abundance of room, the growth being largely of a spreading character. The growth may be blanched by placing slates over them, or inverting a flower pot; tying the points of the outer leaves together is effectual. Plant out young seedlings from the earlier sowings.

Outdoor Tomatoes.—The main crop of these, growing singly to stakes or against walls or fences, should be commencing to ripen. When the fruits show colour they may be picked, and ripened on a shelf in a warm house. Some of the large lower leaves on the plants may be shortened back or removed entirely, especially those below the fruit. Where a good crop has been secured it is now desirable to stop any further extension of the plants, so as to confine the energies in swelling and finishing off the crop already secured.

Indoor Tomatoes.—Less water may be given to plants under glass where the whole of the fruit is far advanced towards ripening. Stop the main extension growth, remove yellow and exhausted leaves, and shorten exuberant foliage gradually. Plants still flowering and setting fruits confine strictly to one stem, rubbing out side shoots. The roots of these must be kept moist, therefore to prevent ripe fruit cracking gather and finish on a shelf.—
LYMINGTON, HANTS.

Trees that Attract Lightning.

—If you are caught by a thunder-storm in the woods, avoid the Oak tree, flee from the Fir trees, but seek the Beech trees. In order to put the worth of this note of advice to the test, a statistical examination was made in Canton Lucerne, Switzerland, by the forest authorities. Out of eighty trees struck by lightning in a forest district where seventeen of the trees were Beeches, fifty-six Oaks were struck by lightning, and twenty-four Firs and Larches, but not one single Beech. The next inquiry needed is to discover the peculiar quality in the Beech to which it owes its comparative immunity.

Publications Received.—“The American Cultivator.” “The Florists’ Exchange,” containing report on the Society of American Florists’ Convention. “The Canadian Horticulturist,” special features: the Riqua Grape, Pan-American horticulture, the Fruit Marks Act, timely topics. “Gartenflora,” a reference is made to the death of the Empress Frederick; illustrations of *Ostrowskia magnifica* and *Incarvillea Delavayi* are presented. “American Gardening.” “Meehan’s Monthly,” with coloured plate of *Vitis incisa*. “North British Agriculturist.” “Pacific Coast Fruit World.” “Florists’ Exchange.” “Le Mois Scientifique.” “Live Stock Journal.” “Agricultural Economist.” “Twenty-sixth Annual Report of the Board of Commissioners of the City of Boston (U.S.A.) Department of Parks.” “Bullettino della R. Società Toscana di Orticultura.” “The Canadian Horticulturist,” special features: the Crosby Peach, Orchardling, Apple Canker, Tulip Culture, Pæonies, Monthly Review. “La Gymnastique Scolaire.” “Vine Culture,” as exemplified at the Paris Exhibition by Sir James Blythe, Bart.; written by request of the London Chamber of Commerce as a guide to Vine production in the Colonies of the British Empire. Cassell’s “Dictionary of Gardening.” “Moniteur d’Horticulture.” “American Agriculturist.”

TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to “THE EDITOR,” 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Mertensia pulmonarioides (Head).—Pulmonarias and Mertensias being nearly allied botanically have in the past been a good deal mixed up. The flower figured on this page is the true *Mertensia pulmonarioides*, or *M. virginica* of gardens. It is one of the best, if not the best, of the genus. Being hardy and easy to grow, we strongly advise you to give it a trial. Seeds may now be sown, and the young plantlets kept till the spring under cover, or cuttings may be taken next month and treated as *Calceolarias* are. The rockery or open border suits it.



MERTENSIA PULMONARIOIDES.

Sulphuring Fruit.—The sulphuring of fruit is practised by the large American growers before packing Apples and the like for shipment. The following is an interesting query and answer on this subject, taken from “The Pacific Coast Fruit World.”—“A. McC.” says: “A question has arisen here (Lemore) as to how long fruit should be left in the sulphur house to make the best dried fruit for the market; also, is reasonable sulphuring injurious to the fruit? Answer.—Satisfying the last question first, I might ask you what you consider ‘reasonable sulphuring.’ What most orchardists call ‘reasonable’ is simply excessive. Most of the sulphured fruit that is placed on the market is injured as a tasteful and nutritious food product by the sulphuring. With reference to how long fruit should be left in the sulphur bath depends upon many conditions; as lightness of sulphur house, amount of sulphur used, kind of fruit to be sulphured, degree of ripeness, length of time from cutter’s knife to bath, &c. All of these conditions must be carefully observed by the operator, and much judgment must be used in the details of manipulation. Suffice it to say that all of the work should be so conducted as to leave the fruit in the sulphur bath the minimum length of time. It is most important that fruit should be well graded as to

degree of ripeness, also that the cut fruit should be exposed to evaporation as short a time as possible. Plan to make the time from knife of cutter to bath as short as possible. No general rule can be laid down for the time fruit should be kept in the sulphur bath. As long as consumers consult the eye rather than the taste and the nutritious qualities of our cured fruit, orchardists will supply the bleached products demanded by the trade.”

Rearing Dates (A. G. B., Hornsey).—The seeds or stones should be sown thickly in clean, well drained, pots or pans, and covered with about their own depth of soil; this latter should consist of about two parts of yellow loam and one part sharp silver sand. The pots or pans should be plunged in, or placed immediately above, a brisk bottom heat, and kept watered, though not sufficient to cause sourness. The seed, however, may be sown, and the plants reared, without bottom heat, in a stove or greenhouse, only the process will be much slower. When two or three leaves are formed on the seedling plants they should be placed in the smallest sized pots that will contain their roots without injury, and be arranged close together in a house where a high temperature and moist atmosphere are maintained. Failing this, place in the best position at command, whether in stove or greenhouse. At the first, and also subsequent potting, it is important that no part of the stem be buried; the plant’s base should merely rest on the surface of the soil, which should be rendered firm throughout. If the plants are reared in a high temperature, they should be gradually hardened off when established, and removed to a greenhouse, in which the Date Palm, *Phoenix dactylifera*, succeeds fairly well, but soon outgrows the space usually at command.

Lilium Harrisii (John).—Pot up the bulbs any time from September till new year, in a rather friable and sandy soil. Drain the pots thoroughly well, and for all practical purposes those of 7 inches or 8 inches in diameter are large enough. Place some sand beneath the bulbs, and set the pots in a cool frame covered with ashes or fibre till it is desired to bring in the bulbs for spring forcing. We force them on shelves in Peach houses at work. See articles appearing in Journal on Lilies.

Narcissus in Turf (John).—Plant about 3 or 4 inches deep in good soil. If the soil is poor, enrich it by incorporating good material. Lift up squares of the turf, and after working the soil properly, place in the bulbs a few inches apart either way. Where thousands of bulbs are to be planted, the quickest way is simply to make two cuts with a spade at right angles in the turf and place in your bulbs. More care must be exercised if the bulbs are other than the commonest. We hope shortly to have a special bulb number, whence you will have further hints on the subject.

Hungarian Melon (T. N.).—We have no knowledge of a Melon by this particular name. It is probably one of several continental varieties grown for decorative purposes in both oval and round forms. The former is represented by the Figari, an ornamental and small-fruited Melon. Its obovoid fruits are scarcely as large as a medium-sized hen's egg; they are smooth and yellow when ripe, and exhale a very decided Melon odour, but are not edible, being only cultivated for ornament, garnishing, &c. The latter is represented by Queen Anne's Pocket or Dudain, which does not differ markedly in foliage and habit from ordinary Melons, but its very small round fruits, marked with brown on an orange or orange-red ground, distinguish it at once from all others. The fruits, when ripe, have a very strong odour, but are not edible; they are only used for garnishing and decorative purposes.

Horse Chestnut Leaves Brownd (Yorkshire).—We have carefully examined the specimens, but failed to discover any traces of parasitic infection. The affection is confined to the leaves, the bark and wood being quite sound. The leaves commence browning and withering from the edges, and presently brown blotches appear on the surface of the leaf generally, these extending and involving a large portion, sometimes the whole, of the leaf. Thus the tree soon presents a scorched appearance, the leaves withering, but hanging on the tree until the late summer and early autumn. The effect—we have had several trees similarly affected under observation for many years—is to greatly weaken the growth, stunting it, so that little annual growth is made as compared with that of quite healthy trees. The only thing we can suggest in the absence of any definite data is the collecting of all the leaves from the affected trees as they fall and burning them. This, in similar case, has been attended with good results, and points to the aecigerous form of some fungus being produced during the winter on the dead leaves, and of the spores causing the recurrence of the leaf-scorch. As the growth of affected trees is considerably weakened by the attack, it would be advisable to give the ground beneath the tree and about a yard beyond the spread of the branches a top-dressing of the following mixture:—Superphosphate of lime, 12 parts; powdered saltpetre, 7 parts; crushed nitrate of soda, 9 parts; and ground gypsum, 9 parts, mixed, applying 4 ozs. of the mixture per square yard in the autumn as soon as the leaves have been cleared away, and repeating in the spring when the buds commence swelling. There is no need to point it in, the rains will do that fast enough.

Names of Fruits (J. M.).—Apple Irish Peach.

Names of Plants (G. D.).—*Physostegia virginiana*. (J. M.).—1, *Salvia argentea*; 2, *Mimulus (Diplopappus) glutinosus*; 3, *Philadelphus coronarius*, the Mock Orange; 4, *Begonia acutiloba*; 5, *Begonia fuchsioides*; 6, *Nephrolepis acuminata*. (Alex Small).—1, *Hieracium gymnocephalum*; 2, *Satureia montana*; 3, *Sagittaria volubile*; 4, *Rudbeckia purpurea*. (R. T.).—*Lythrum virgatum*. (W. G.).—You are correct, *Linaria pallida* is the name; *Linaria Cymbalaria* is found generally on walls. (R. M.).—1, *Acæna microphylla*; 2, *Hypericum oblongifolium*. (A. J. H.).—*Petræa volubilis*. (M. H.).—Sorry to say specimens were poor and much dried up when inspected. 1, *Alpina Galanga*; 2, *Eulalia japonica foliis striatis*; 3, *Aralia elegantissima*; 4, probably *Maranta*; others unrecognisable.

Trade Catalogues Received.

Carter & Co., High Holborn, London.—*Bulbs*.

Alexander Cross & Sons, Ltd., 19, Hope Street, Glasgow.—*Choice Flowering Roots*.

Alexis Dallièrre, Victoria Nurseries, Ghent, Belgium.—*Autumn Catalogue of Stove and Greenhouse Plants*.

Frank Dicks & Co., 66, Deansgate, Manchester.—*Bulbs*.

Fisher, Son & Sibray, Ltd., Royal Nurseries, Handsworth, near Sheffield.—*Bulbs and Flowering Roots*.

W. Fromow & Sons, Sutton Court Nursery, Chiswick, London, W.—*Bulbs*.

Harrison & Sons, Market Place, Leicester.—*Bulbs and Roots*.

H. J. Jones, Ryecroft Nursery, Lewisham, S.E.—*Bulbs, &c.*

Kent & Brydon, Seed and Bulb Growers, Darlington.—*Flowering Bulbs, Fruit Trees, &c.*

Pope & Son, King's Norton, Birmingham.—*Bulbs*.

John Russell, Richmond Nurseries, Richmond, Surrey.—*Bulbs*.

Ed. Webb & Sons, The Royal Seed Establishment, Worsley.—*Bulbs*.

Covent Garden Market.—August 28th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush. ...	2	6 to 4	0	Melons, each ...	0 9 to 2 0
„ dessert ...	4	0	6	Pears, French Williams,	
Bananas ...	8	0	12	48s. per case ...	3 9 4 3
Damsons, $\frac{1}{2}$ sieve ...	1	6	2	Pears, English, $\frac{1}{2}$ sieve ...	3 0 6 0
Figs, green, doz. ...	2	0	4	Pines, St. Michael's, each	3 0 4 6
Grapes, Hamburgh, lb. ...	0	6	1	Plums, $\frac{1}{2}$ sieve ...	2 0 3 0
„ Muscat ...	1	6	3	„ Green Gages, $\frac{1}{2}$ sieve	2 6 3 6
Lemons, Naples, case ...	24	0	30		

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2	0 to 3	0	Lettuce, cos, doz. ...	1 0 to 2 0
„ Jerusalem, sieve	1	6	0	Mushrooms, forced, lb. ...	0 8 0 9
Batavia, doz. ...	2	0	0	Mustard and Cress, pnt.	0 2 0 0
Beans, French, bushel ...	3	0	4	Parsley, doz. bnchs. ...	2 0 5 0
Beet, red, doz. ...	0	6	0	Peas, bush. ...	4 0 0 0
Cabbages, tally ...	1	6	3	Potatoes, English, ct. ...	4 0 6 0
Carrots, new, doz. bnch. ...	3	0	7	Radishes, doz. ...	0 6 0 9
Corn Salad, strike ...	1	0	1	Shallots, lb. ...	0 3 0 4
Cucumbers, doz. ...	2	0	3	Spinach, bush. ...	2 0 3 0
Endive, doz. ...	1	0	1	Tomatoes, English, lb. ...	0 2 ½ 0 3
Herbs, bunch ...	0	2	0	Turnips, doz. bnch. ...	2 0 3 0
Horseradish, bnch ...	1	0	0	Watercress, doz. ...	0 6 0 8
Leeks, bunch ...	0	1 ½	0	Veg. Marrows, per tall ...	2 6 3 0

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5	0 to 12	0	Foliage plants, var., each	1 0 to 5 0
Araucaria, doz. ...	12	0	30	Fuchsias ...	3 0 4 0
Aspidistra, doz. ...	18	0	36	Geraniums, scarlet, doz.	0 0 4 0
Campanula, pyramid, doz.	10	0	12	„ pink, doz. ...	0 0 4 0
„ isophylla ...	4	0	6	„ King of Denmark, doz.	3 0 4 0
Crotons, doz. ...	18	0	30	Hydrangea panicula, doz.	10 0 15 0
Dracæna, var., doz. ...	12	0	30	Lycopodiums, doz. ...	3 0 0 0
Dracæna, viridis, doz. ...	9	0	18	Marguerite Daisy, doz. ...	3 0 4 0
Ferns, var., doz. ...	4	0	18	Myrtles, doz. ...	6 0 9 0
Ferns, small, 100 ...	10	0	16	Palms, in var., doz. ...	15 0 30 0
Ficus elastica, doz. ...	9	0	12	„ specimens ...	21 0 63 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1	0 to 2	0	Marguerites, white, doz.	
Carnations, 12 blooms ...	0	6	0	bunches ...	1 0 to 2 0
Cattleyas, doz. ...	15	0	18	„ yellow, doz. bnchs.	0 6 1 0
Eucharis, doz. ...	1	0	2	Odontoglossums ...	3 0 4 0
Gardenias, doz. ...	1	6	2	Roses, Niphetos, white,	
Geranium, scarlet, doz.				doz. ...	1 0 2 0
bunches ...	3	0	0	„ pink, doz. ...	0 6 1 0
Gladioli, doz. bnchs. ...	4	0	6	„ yellow, doz. (Perles) ...	1 0 1 6
Gypsophila, doz. bnchs. ...	3	0	0	„ red, doz. ...	0 6 1 0
Lilium lancifolium album	0	9	1	Smilax, bunch ...	2 0 2 6
„ rubrum ...	1	0	1	Stephanotis, doz. ...	1 6 2 0
„ longiflorum ...	1	6	2	Stock, white, doz. bnchs.	1 6 2 0
Lily of the Valley, 12 bnchs	12	0	18	Sweet Peas, white, doz.	
Maidenhair Fern, dozen				bunches ...	3 0 0 0
bnchs. ...	3	0	4	„ coloured, doz. bnchs.	3 0 0 0
Mignonette, English, doz.	0	9	1	Tuberoses, gross ...	1 6 2 0



Resting on Our Oars.

THAT is if a farmer can ever be said to rest, but there does appear a time when the pressure of work is a little less severe, when a crisis has been passed as it were. Here we are, with field after field cleared; and, indeed, some of them, to our sorrow, took very little clearing. What a boon fine weather is! At the beginning of this month it appeared possible, nay, even probable, that the weather had broken; down fell the rain in torrents, and the days seemed to "take off" and turn so cold. Glad of the rain, too, we were; pastures were bare, nearly as bare as the high road, and Turnips were at a most crucial point. There was little to fear this year in the matter of laid Corn, for hardly any was heavy enough to lay. There was a fear that the high winds might neck the Barley, the rains had finished the ripening of it so quickly. It is a very pleasant sound, the whirr of the reaper, but even reapers are liable to give way, and it is an awful nuisance to

be delayed half a day because of a breakdown. One enterprising machinist here lets out reapers, and if desired sends a man to drive and a 'prentice to repair. Sometimes the 'prentice is not equal to the job; but then the swift bicycle takes him to the shop, and he can, in a technical manner, describe the ailment, and a qualified practitioner is at once sent off. We like ourselves to have two machines at work in the same field; every fine hour of a harvest day is most precious.

There has not been any complaints about Clover in Barley sheaves this year. Why? because simply the seeds barely exist. The prolonged drought of the summer has militated against their growth, and the question is exercising many minds as to whether anything can be done to make good the deficiency. Clover plants are ticklish things to meddle with. Should the winter prove a mild one they will probably grow and multiply in a marvellous manner. If not, well, we shall be very awkwardly fixed next year, and not only next year, but the following crop will show only too plainly where the lack has been. We fancy ourselves a little Rye Grass judiciously sown now among the seeds might be an experiment worth trying. The season is early, we may hope for rain, and Rye at least would make a bit of a bite early on. Another way out of the difficulty, or rather an alternative, would be to sow a piece of land with *Trifolium incarnatum* and Rye Grass for early eatage, and then take after it a Turnip or Rape crop. We are bound to have spring meat of some sort.

The machines have gone beautifully this season, save on the soft carr lands, where Barley, for instance, was a heavy crop and a good deal laid, so much so, indeed, that the work of the machine was as it were a grand triumph of mind over matter. The worst of these heavy Corn crops is that they are worth so little; the sample of a laid crop is never up to much, the weight of straw will be useful though the quality may be but inferior. Potatoes are in flower again, and that, we fear, speaks of second growth. It requires a brave man to sample or try his Potatoes at this time of year. A series of diggings may reveal a not pleasant state of affairs. We heard recently of a crop of British Queens on good red land (Covent Garden Market land) that proved on examination to be very small and very few. Well, an open autumn may do wonders, especially where land is in tip-top condition. We fancy, after all our doubts and fears, there will be a Turnip crop, and what a boon and relief that is no one knows but the poor farmer. The milk yield is bad, no wonder we see in the papers that many attempts have been made to raise the price, and good milk cows are bad to find and very dear. After the whirr of the reaper comes the hum of the threshing machine, the relieving officer, as we call it hereabouts. We like to see old straw for thatching purposes, it is rather a sign of weakness when the new has to be used.

This neighbourhood has been visited by some severe hailstorms. We have not experienced them for several seasons, and consequently some of us most foolishly have allowed our crops to go uninsured. One neighbour is said to have suffered to the extent of £1000, and there are many cases where the loss can be very ill borne. Whatever else is at a standstill weeds are not, and we want, or ought to have, men constantly among the Turnips. There will be a good chance this year of getting the plough to work early. A forward harvest has great advantages. "Back end" work when very back end is so often retarded by bad weather and shortening days. We saw in a daily paper an outcry against child labour, the iniquity of closing the schools for harvest or Potato time. Just ask some of the mothers what they think. Harvest work for children is now confined to taking "father's dinner, and don't they make a play of that!" We rather think they do. We have not seen children even gleaning for many years past, the only gleaning they do is the hedgerows for the brambles, which they "tell" liberally. Then about the Potato time, do they find it a hardship? Just ask them. What about the boots and winter clothes that their money provides? Village mothers hate unemployed holidays, the children are always in the way, and wear and tear their decent garments far more by play than when in the fields at work. The hours are not long, and the work is not hard, and the pay good. If they left school a little earlier, and were trained into a bit of farm work, we should not hear so much about the labour question. No one likes to do what they do not understand, and after fourteen the boy is getting too old and conceited to learn.

Glad as we are to see the bare stubble, there is a feeling of regret that another harvest is over—another summer nearly run its course. We only wish we could think this has been a prosperous year. When all is reckoned up there is little enough to divide. The "poor" landlord first, the "rich" labourer, the rate collector, the tradesman, and little or nothing for the producer. There really is no man so well off now as the foreman, and after him the yearly labourer on a farm. Their pay is good and sure, no weather affects them, no drop in prices, and these are the men who are quickly taking the places left vacant by

the better-class farmer, who is vanishing rapidly. Who will take the place of these men is not for us to say. We doubt whether they will save so much as farmers as they did when wage-earners, at any rate their sleep will be more disturbed by anxieties, and their money by no means so certain. Hereabouts this class of men work very hard themselves, but stint the farm of labour and tillages; this may answer for a time, till they have got all the heart out of the land, but what of the future? The deluge will come sooner or later, and someone without an ark will have to face it.

Work on the Home Farm.

Ah! what splendid harvest weather, farmers must be doing well. Such are everyday comments by the general public as it travels by rail through the country districts on business or pleasure intent. Very amusing conversations may be overheard in railway carriages, and often to hear people's remarks, one might be led to think that when the Corn was all in the stackyard farmers had nothing to do but to enjoy themselves until another harvest came round. "In the morning sow thy seed, and in the evening withhold not thy hand, for ye know not whether shall prosper, or whether both shall be alike good." So said King Solomon, and his words are true now as they were then; but we must not be too dependent upon Providence, but sow in season, and see that the seed grain is put into a suitable seed-bed. Therefore is the farmer's work never done, for preparation for another crop always precedes the fruition of the last one. Ploughing seeds for Wheat must be done when possible, but the soil is still very dry, having been hardly reached by the rains, and more moisture must come before good ploughing can be made. If it be difficult to plough there need be no delay in breaking up bare stubbles. Modern cultivators, sufficiently horsed, will go through anything, and before September is half through next year's fallows should have received such a dressing over as they will not forget for four years at least. Now is the time to get full value out of these useful machines, not to take the place of ploughing, but to prepare the land for it.

As we said last week, there is nothing like fine dry weather for lambs, and we are glad to say that good health universally prevails. Until we have had some frost care must be taken that sheep are not allowed to graze in swampy fields, or those which have pools of stagnant water in them. The green herbage around such places will attract the sheep, which may contract therefrom the liver fluke, bringing with it, at lambing time, death, disaster, and disappointment instead of a healthy crop of lambs. The pest does not prevail in all swampy places, but there is always the possibility of its presence. The farmer who has no dog is much less liable to a visitation of this plague, for the fluke cannot go through its stages of development without passing through a dog's stomach. Where there are absolutely no dogs there will be no liver fluke.

Rumour is busy with threshing results. Tests have not been numerous enough to be reliable, but Wheat is said to be yielding in an uncommon way. May this promise be fully realised.

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World's Wheat Crop.—Mr. J. K. Carthew again submits an estimate, which shows that in 1901 the world's Wheat crop as a whole has increased in bulk and improved in quality. Will there be lower prices as a consequence? asks the London "Daily Mail." Mr. Carthew prophesies that prices will be maintained, because reserved stocks are lower than last year, and the deficiency in the American Maize crop is so enormous. Taking the thirteen chief Wheat-growing countries in the world, not one of which produces less than 4,000,000 quarters of Wheat, the United States comes easily first, with a gigantic crop of 90,000,000 quarters. European Russia (and Siberia's crop is itself considerable) comes next, if a long way after, with 42,000,000 quarters; France follows closely with 38,000,000; India is expected to produce something over 30,000,000—this is problematical, of course, as the crop is only being planted now, though under satisfactory conditions; and then comes Italy, with 17,000,000; Hungary, with 16,000,000; Spain, with 13,000,000; Roumania and Bulgaria, with 12,000,000; and Germany, with 11,000,000 of quarters. The United Kingdom is last but one in this list of thirteen chief countries; its crop is estimated at 7,250,000. The very last is Australia, with 6,750,000 quarters. The world's crop, then, exceeds last year's by no fewer than 27,000,000 quarters—more than the entire output of the United Kingdom, Canada, and Australia taken together. The collective harvest of the thirteen countries reaches the enormous total of 305,250,000 quarters, a bumper crop. As to the English harvest, the acreage devoted to Wheat has again shrunk, but, in spite of this, the yield will be larger than last year, and the quality of the grain will be better. Prices will remain steady, and the prospect favourable, for the failure of the American Maize crop will tend to keep a large portion of their Wheat harvest in the United States, and react favourably, in consequence, on the agricultural industry of the United Kingdom.

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Journal of Horticulture.

THURSDAY, SEPTEMBER 5, 1901.

Early English Gardening.

The Saxon Era.

WHEN the conquering arms of Rome reached this almost Ultima Thule of their geography, they found the barbarous inhabitants existing chiefly upon the produce of their herds and of the chase, although not totally inattentive to the cultivation of the soil. The inland inhabitants, descended from the Cimbri, lived in straw-thatched cottages, and knew nothing of husbandry; they tilled no ground and sowed no corn, but subsisted for the most part on milk and flesh ("Cæs. Comm." lib. v., c. 14). But those who dwelt near the coast, and particularly on that part of it now known as Kent, Essex, Suffolk, and Norfolk, were acquainted with the treasures of the soil. From their intercourse with the Belgæ, and the frequent visits of that people, either for trade or plunder, the natives of the coasts seem to have early acquired a knowledge of husbandry. It is to this part of the island that Tacitus refers when he says, "The soil is such that, except the Olive and the Vine, and other vegetables usually raised in hotter climes, it readily bears all fruit and grain, and is very fertile. Vegetation there is rapid, but ripening is slow; and for both these effects there is the same cause—the excessive humidity of the soil and air" ("Vita Agric." c. xiv.). That it was only the inhabitants on the coast, and those who were either Belgæ or descended from that nation, who cultivated the soil, is clear from the statement of Strabo (lib. iv., c. 5), where he says, speaking of the aborigines of Britain, "They resemble the Gauls as to manners, if it is not that they are more barbarous and less intelligent than the latter. There are some of them so ignorant, that, having milk, they do not know how to make cheese; and they are equally ignorant of the art of gardening, as well as of the other operations of agriculture."

The crops which would be grown by these early cultivators of the soil were doubtless the

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same as those which received the attention of the Gauls and Belgæ, from whom they learned the art of husbandry. The Carrot grows wild in Britain, as it does in France; from the latter it was imported into Italy, being only improved by cultivation; at least, such is the inference of the best critics upon this passage in Pliny:—"There is a fourth kind of Parsnip, by our people (the Romans) it is called *Gallica*, while the Greeks, who have distinguished four varieties of it, give it the name of *Daucus*." Unless it has been employed by the natives, we can scarcely conceive so useless a weed, as it is in a wild state, would have gained the attention of the Roman legionaries. Turnips were particularly abundant in Gaul; so extensively indeed were they cultivated as to be given to cattle. "Turnips," says Columella (lib. ii., c. 10), "are food not only for men, but for oxen also, especially in Gaul, where this kind of root affords nourishment for the cattle in winter."

We quote these facts, because the practices of the Gauls must have been known to the Cantii, or inhabitants of Kent, whom Cæsar especially describes as more advanced than the other Britons in the habits of civilised life, and as little differing from the people of Gaul.

We have, however, direct evidence of the similarity of their practices in cultivating the soil, in this notice of their use of marl as a fertiliser. Pliny says (lib. xvii., c. 4), "It is only right that I should be rather exact in noticing this marl, which tends so greatly to enrich the soil of the Gallic provinces and the British Isles. Another kind is the white chalk, used for cleaning silver (modern whiting); it is taken from pits sunk a considerable depth in the ground; it is in Britain more particularly that this chalk is employed. The good effects of it are found to last full eighty years, and there is no instance known of a farmer putting it twice on the same land during his life."

If we turn to what we can glean relative to one of the most important of our hardy fruits, we are justified in concluding, even from the etymology of its name, that it was cultivated by the Britons before the arrival of the Romans.

In the Welsh, Cornish, Armorican, and Irish languages, or dialects, the Apple was denominated the *Avall* or *Aball*. In Welsh, the wild Crab tree is still called *Ajalwydden*, and in the Gaelic, *Abol-fadhaich*. The Hedui, who dwelt in the modern Somersetshire, appear then, as now, particularly to have cultivated this fruit, and their town, which stood upon the site of the present Glastonbury, was known, when the Romans first visited it, by the name of *Avallonia* (Apple Orchard).—"Richard of Cirencester," lib. i., c. 6, s. 14.)

We have seen how the inhabitants of Kent approached in their manners and practices their continental neighbours, and it is very improbable that they did not thence derive any improved object of cultivation. Kent has immemorially been celebrated for its orchards, and we may conclude that these contained the Belgic varieties of the Apple. That the Belgæ had such varieties, we have the testimony of Pliny, who says ("Natural History," lib. xv., c. 14), "The Spayed Apple (*Spadonium*) of the Belgæ is so nicknamed from its having no pips." Dalechamps thinks that this was one of the Apples still known in France as the *Passe Pomme*; but there is no sufficient reason for such an opinion; some of the varieties of Apples so called have an abundance of well-developed pips, and there are others in which they are few in number, but none are absolutely abortive. There are, however, Apples in which the seeds are wholly abortive, and without any core at all; but we would look with suspicion on any attempt to identify the fruits of the ancients with the varieties now in cultivation.

Other fruits, as the Pear, Damson, &c., being known by names evidently derived from the Roman appellations, we, on the other hand, are induced to consider as being introduced to the Britons from Italy. The same observation may apply to the Rose and other inhabitants of the flower garden, of which there is little doubt the Britons were ignorant before their introduction by the Romans. The kitchen garden is similarly indebted for most, though not all, of its inhabitants. The Cabbage, or Kale, tribe is an example of the exceptions. *Kavitch* is the name in the Cornish dialect, and *Caul-wort* is mentioned in the oldest Anglo-Saxon MSS. They are names not derived from the Latin.

Of the Roman pleasure grounds during the decline of the empire we have the most ample accounts. Highly polished as were the citizens of the then Mistress of the World, it was in this department of horticulture their luxury and taste was displayed, and the most poetical subject here proffered itself to the pen of the historian and man of letters. To the Briton, just emerging from his barbarism, that

which was most useful seemed most worthy of attention; hence the fruit garden became his first particular care, and it is of this, in the earliest periods of which records exist, that we have the most particular, though, at the same time, scanty notice.

Tacitus, as already noticed, informs us that all fruit trees succeeded in Britain, except such as required a warmer climate. It is evident, from this cursory remark, that the Romans began immediately their endeavours to improve the place of their settlement, even before they had penetrated into the southern and more mild districts of the island: or before its climate could be ameliorated by the removal of exuberant forests and accompanying marshes, the never-failing deteriorators of the climate of the country in which they abound. That they did begin improving their new settlement is proved by the testimony of Pliny, who informs us that they introduced Cherries into our island B.C. 42. His words are:—"Cherries were not in Italy before the Mithridatic victory of L. Lucullus. He first brought them to Rome, out of Pontus, in the year (of the city) 680, and in 120 years they have crossed the ocean, until they have reached even Britain."

(To be continued.)

The Penetrative Power of Tree Roots.

SOME extraordinary instances at times occur in which the great power displayed by tree roots is found. It is well known what great persistence there has been found in Vine roots in their determination to pass from an inside border to the open ground through the wall of the house. Vine roots, too, have been seen actually piercing a brick itself, and when one considers for a moment the soft and brittle nature of a Vine root, or any other root, it is scarcely credible that they possess such resistive force. I well remember the late Mr. Pratt, when at Longleat discovered, much to his surprise, that the roots of the far-famed Vines had gone through the walls into the outer soil, and were revelling in the vegetable quarters with the Potatoes, and this despite the cost of providing an almost inexhaustible turf border, and skilful attendance in watering and feeding. The walls, in this instance, were, I believe, 14 inches in thickness, a strength one would naturally have supposed to be a sufficient barrier to Vine roots. As one might have expected, the roots passing through between the brick joints became flattened and distorted, but despite this, a circulation of sap can pass this interruption, and if allowed to proceed unmolested, the roots cover a large area with feeding fibres. Not that such a state of things is conducive to better results; it may go on successfully for a time, but when the resources of the Vines are taxed by periods of drought or heavy rain, and the area of these officious roots becomes extensive, then shanking of the bunches or decay of berries, and a diminished pleasure and profit, becomes inevitable. Such instances may be recounted almost every day, and probably there are many that have yet to be discovered, and, as in the case of the Longleat Vines, where least expected.

A curious and interesting case of this root-travelling was recently related to me by Sir John Wallington of Keevil Manor, near Trowbridge. On the south front of the Manor house, which apparently dates far back into the past century, there grows a Brown Turkey Fig, and years ago its crops were regular and heavy. Severe winters, however, dealt harshly with it, and its branches were reduced from the highest extremity of the walls to the ground line, and the luscious fruit, which were dealt out by the basketful to any visitor who cared to take them, became only a matter of history. Within the past few years the tree has raised its head again, and is soaring upward to its former position, and bearing fruit freely, but the remarkable incident connected with it is that a few years since a Fig shoot was seen to protrude through the masonry joints on, or slightly above, the ground line. This is found to be a root that has traversed a distance of some 12 yards below the foundations, and not satisfied in its search there made an exit through the wall, which is more than 1½ foot in thickness, and now a second tree as large as the original, clothes another portion of the house. In its passage through the stone joint it became flattened, and protruding through on to the soil it slowly thickened, until now there is such a mass of congested timber that, except to the owner himself, there is nothing to suggest a twin relationship with the original. The latter occupies a position against the projecting stone built lobby forming the entrance to the Manor, so that the roots have gone beneath the foundations of this and the main building beyond. Sir John Wallington cut off the first tiny shoot that issued between the joints of the masonry with his pocket knife, without suspecting that it was a fractional part of his favourite fruit tree. Now, of course, it has an independent existence from roots issuing from the newly made stock.—W. S., *Rood Ashton*.



The Week's Cultural Notes.

The bulbous section of Orchids, consisting of *Pescatoreas*, *Warscewiczellas*, *Bolleas*, and similar plants, are often in active growth

now, and must be encouraged. They like a comparatively shady position, not a dense shade, but a kind of subdued light like that thrown by a group of larger plants or a fairly heavy growth of climbers on a roof. In the middle of summer this would not be sufficient, but now it is necessary to consolidate the growth as it is made, for these kinds are rather erratic in their habits, and unless steadied down a little in autumn are apt to throw out growths later on, which will be moving sluggishly during the winter, and most likely flowerless. Encourage them now, then, and get the growths well finished while there is plenty of light and warmth without much fire heat; they will rest naturally in winter and come away strongly in spring. Any of the Moth Orchids that are growing upon the stages should now be suspended near the roof-glass if possible. There is no comparison in the two positions, as when suspended the air and light reaches every part of the plant, to its benefit. I have, in fact, seen a collection that was only in very moderate health restored to vigour simply by being suspended, although previously the plants were only a foot or so from the glass.

The pretty *Dendrobium chrysanthum* will, by now, be getting out of flower, and the plants must be placed in a cool light house to rest awhile. It is impossible in most cases to prevent its growing in late autumn or early winter, but the longer it rests previously the stouter the growths will be. The plants should not be repotted until after the new leads have made some progress and are about to commence rooting on their own account; if done earlier they are apt to decay with the least

overdose of moisture. *D. phalaenopsis* must be kept well going until the flowers are opening, and after these are past it, too, takes a long rest.

Vanda teres is now well established in the new baskets or rafts, and growing very freely. Ample heat and moisture, and a perfectly open and unshaded position, must now be given it, the syringe being freely plied about the roots and leaves on hot days at closing time. Old leggy specimens of *Vanda suavis*, *V. tricolor*, and others may still have attention in the matter of lowering them in their pots and covering the air roots with compost. This will cause the latter to push out laterally, and will materially strengthen the plants as well as improving their appearance.

Oncidium leucochilum.

Experienced growers will see here an old and popular favourite, one that can usually be depended on, and combines a noble habit with great beauty of flowers. The blossoming period is very uncertain, but the huge spikes of yellowish-green flowers spotted with dark brown are always handsome and imposing. Furthermore, these spikes remain fresh for several weeks. This species (from parts of Mexico and Guatemala) requires intermediate house treatment, and must have water afforded to its roots all the year round.

Odontoglossums.

It would not be easy to say which is the most popular genus of Orchids in cultivation, but in all probability if it were possible to take a poll of the number of plants of each genus, that the *Odontoglossums* would come out very near the top of the list. No one who grows Orchids at all can afford to do without *O. crispum* and *O. Pescatorei*. Few would care to be without the showy *O. grande*. Such plants as these are welcome everywhere, and there are many such comprised in the genus. Indeed, it is very doubtful if in the whole lot there is a single species that is not well worth growing, many of the smaller flowered sorts being interesting on account of their rich and varied tints of colour.



ONCIDIUM LEUCOCHILUM.

In the earlier days of Orchid culture this lovely genus was in very ill favour. If orchidists reasoned at all they must have argued that because a moderate amount of heat was good for the plants they knew that inhabited the lower regions of the tropics, that therefore more heat must be better, and the poor *Odontoglossums* were transplanted from their high alpine habitats and set in hot-houses to stew

their lives out. Little wonder that they soon died, or that disappointed collectors sent home accounts of the beauty of these plants in their native places that were not believed by disappointed cultivators at home.

All this is fortunately changed for the better. Orchid growers endeavour to find out what the conditions are that the plants grow under naturally, and to imitate these as far as possible under cultivation, with advantage to their pockets and the plants. And this I can advise readers who are beginners in Orchid culture to do. High up on the mountains of Peru and adjoining countries, the temperature does not vary so much winter and summer as in lower altitudes, and the day and night are more nearly equal. Consequently, while in summer in this country they are likely to be burnt up unless heavily shaded, in the winter they pine for light, which is denied them by our sunless skies.

Cool moist conditions, then, all the year round with as much air as possible, according to the season, is what they delight in. Some growers prefer a house with a north aspect for them, owing to the coolness of the position in summer. At this season it is excellent, but in winter such places are often unduly shaded, and therefore unsuitable. Taking all points into consideration, I contend that a low span-roofed house running north and south, or as nearly as possible, is best for them. A sunk or excavated path allows head room without making the ridge too sharp, and is an advantage. With such a house as this ample light is secured in winter, and being small and low, it is easily kept shady and cool in summer.

The atmosphere must be kept constantly moist by frequent damping down of the floor, the stages, and between the plants. The plants themselves may be lightly dewed over twice daily in hot weather, but the water must only be applied in the form of spray; a heavy douche is quite wrong, as it soddens the compost, and makes it very difficult to tell whether it requires water or not, the surface being often wet while the lower compost is quite dry. And this leads to another point in watering *Odontoglossums*. If the water is poured on the surface of the compost with an ordinary watering can, most of it runs off to waste. A far better plan is to use a rose syringe, holding this upright directly over the plants, and forcing the water through it.

Odontoglossums do not need a large body of compost about the roots; it is injurious to them, in fact, and for all small and medium sized specimens an inch margin of compost between the pseudo-bulbs and the rim of the pot is ample. It should be kept thin, too, quite two-thirds of the depth of the pot being filled with clean crocks, and plenty of loose pieces of this material being mixed with the peat and moss. The compost should be firmly bedded in with a blunt-pointed dibber, and a few green growing points of sphagnum placed in at intervals. The constantly moist atmosphere will insure this keeping alive and growing, forming a dense cushion under the bulbs, and inducing the free production of roots.

These remarks apply to all the *O. crispum* and similar habited sorts, but the looser habited species, such as *O. Edwardi*, will, of course, need more room—a larger pot, with rougher and more open compost. Even *O. grande*, *O. Schlieperianum*, and *O. Insleayi* and their varieties when strong can do with a little more, but small or weak specimens must be treated as advised above. All are subject to the same class of insects, black and yellow thrips being the most troublesome to deal with. Frequent spongings with a weak solution of nicotine and occasional fumigation are the most ready means of destroying the pests, and plants kept healthy and growing freely are less likely to be attacked than weak or stunted ones. The time for repotting varies, as in a collection of plants all, even of one species, will not be ready at once. The most suitable time is when the young growths are about half made up, and before they commence rooting on their own account. From the beginning of September to the middle of October is a good time for a general potting, while any then in flower or forming the spikes may with advantage be left until the early spring.

(To be continued.)

Odontoglossum Halli.

Many persons seeing a poor form of this species at first, have come to the conclusion that it is a very second-rate kind, while as a matter of fact in its best forms it is a remarkably fine species. I have on several occasions had the beautiful yellow-lipped variety *xanthoglossum*, with spikes a yard in length, well furnished with the handsome blossoms. I would strongly advise intending cultivators of this species to obtain newly imported plants if possible, as they come away much more strongly than others that have been for years in the Orchid house. When obtained they should be placed in moderately large pots of crocks in a house rather warmer than the *Odontoglossum* house is usually kept. Signs of growth will soon be apparent, and the crocks should be watered daily, the plants also lightly dewed overhead. When they commence rooting place a little rough peat and moss about the surface of the crocks, and the roots will run in this and establish the plants. Once established, *O. Halli* is perhaps the easiest of all the *Odontoglossums* to grow, and no trouble will be found in getting it to flower freely if the usual conditions are kept up.—H. R. R.

Book Notices.

Wall and Water Gardens.*

THE decorative phase of gardening is yearly becoming a subject of greater study, more variety, and of improved forms of beauty. Gardening ought to have something of the decorative element in every one of its departments, but that cast, purely designed to produce beautiful effects from plant, tree, and shrub combinations has many more devotees than the purely profitable sections can boast of. It shows how great a field the operator or garden designer can embrace, when we see here before us a handsome volume dedicated entirely to a discussion and consideration of wall and water gardening, which is but a minor part of the art in its completeness. This phase of decorative endeavour is subdivided by the author under a few heads, for after all she has but the choice of "The rock garden," "The dry wall terrace garden," ponds, pools, tanks, and bogs. These parts of her subject have been further treated according as the pond is large or small, or has other incidental and individual characteristics. "Tubs in small water or bog gardens" furnishes matter for another of Miss Jekyll's chapters, as do "Water margins" and "Water Lilies."

The first one hundred pages are devoted to phases of "wall" or rock gardening, and treat largely on the cultural aspect demanded for plant-clothed walls, situated it may be, in the shade, or, on the other hand, in the sun. How to build a dry wall so that plants may be expected to grow and thrive when planted, is ably explained, and the author's instructions are assisted by means of apt illustrations. Miss Jekyll has written up the subject from every point of view, and her endeavour will have the effect of drawing to wall and water gardening that attention which has been so much absorbed by other decorative sections of horticulture and of garden designing. Written in her free and lucid style, and beautified on every alternate page by handsome illustrations, which the author thoroughly describes, this book will be found exceedingly interesting and unquestionably useful to both gardeners and their employers. A complete index accompanies the pages, which number 177. It is unnecessary to praise the general appearance and quality in this respect, of a "Country Life" publication.

Pictorial Practical Fruit Growing.†

Like Mr. Walter P. Wright's other books on practical gardening, the one now under consideration is pregnant with important details necessary to be understood for successful practice in the cultivation of fruit trees, fruit bushes, and plants of an edible fruit-bearing nature. Mr. Wright wastes neither the space in his pages nor the time at the disposal of his reader. What he has to say he says clearly, precisely, and interestingly. With an abundance of woodcuts at his disposal, he has been saved the need of furnishing much ambiguous description. There is no doubt that readers of books on practical subjects, nowadays demand, or at least greatly appreciate, those publications wherein the author's text is freely assisted by simple yet comprehensive illustrations. The author of "Pictorial Practical Fruit Growing" has devoted his opening chapter, most wisely as we think, to a consideration of how best to utilise space—that is, superficial ground space and wall surface. He then proceeds to discuss the forms of fruit trees, and makes it his object to emphasise those which he concludes to be best for the several purposes. The operations of pruning, planting, grafting, manuring are discussed; and selections of Apples, Pears, stone fruits, and bush fruits are provided.

Outdoor fruits are not alone treated of; there are chapters exclusively devoted to Grapes and Melons. Again, the Medlar, Mulberry, and Blackberry are not forgotten, though, of course, only a very few lines are expended on either the Medlar or Mulberry. The Blackberry is more fortunate, and, indeed, here Mr. Wright vents a portion of his satiric humour. The remedies against insects and fungi are numerous, and a few are but little known. Thus we have here "soaparite," a coined word which applies to paraffin emulsion; "sulpotide," sulphide of potassium and water, besides "carbam" and "sulpharite." The tone of freshness, and the quaint expressions running through the book adds much to its readableness and interest.

We find no reference to the Japanese Wineberry nor the Loganberry, but the author warns his readers against troubling about the so-called Strawberry-Raspberry. There is a rumour of another novelty in hardy fruits, to wit, the MacDonald berry, and about all of these we may hear when "Pictorial Practical Fruit Growing" reaches a second edition. In his remarks on "Large Vines and Record Bunches," the author omits to mention the famous Vine of Auchmore, near Killin, which surely has been often enough brought to notice. The number of pages embraces 152 (7½ inches by 5 inches), consisting of stout paper, smooth, but not too glossy, the typography being clear and pleasant to read. We prophesy great success for a book so cheap and useful.

* Wall and Water Gardens, by Gertrude Jekyll. "Country Life" Library. Messrs. Geo. Newnes, Ltd., 12s. 6d. nett.

† Pictorial Practical Fruit Growing. By Walter P. Wright: Cassell and Company, Ltd. Price 1s.

Notes on Nymphæas.

SOME of the new Nymphæas seem to be not wanting in private manners and customs, occasionally of an undesirable nature; and as also the rarest and most expensive do not appear to be necessarily the best and most desirable, a few notes on their habits and culture may be useful. It is well to remember at the outset that these plants will grow and flower much better in good soil—strong loam—than they will in mere sandy mud, the washings of a stream in light soil. That the water should be as stagnant as possible compatible with a maintenance of the same height in hot dry weather; that it should be thoroughly exposed to the sun, free from injurious insects, birds, or water rats; and that the Laydekeri and smaller varieties should be grown in less than a foot of water, and the Marliacea and more robust plants should have rather a greater depth.

N. Aurora is generally highly praised, and considered rare. I do not recommend it; the flowers are small and short petalled, not a very attractive colour, and not very freely produced. That they change in colour each day—a custom for which the variety is recommended—is true, but all the reds and pinks, except, perhaps, the true Marliaceas, do this. The foliage is plentiful and prettily marked, but not large.

N. Ellisiana is, to my mind, the best of the dark or crimson Nymphæas. It is not, I suppose (for it is only with thoroughly established plants that one can judge of this), so large as gloriosa or William Falconer, but is a brighter and more dazzling colour than either. The flowers on the third day, when the stamens bend inwards, are of a wonderful colour in the centre, very bright crimson with a suspicion of orange. It is quite true, as Mons. Latour Marliac said, that the flower, even at a distance, shines like a ruby upon the water. It is a pretty good grower, and can do with deeper water than the Laydekeri varieties.

N. gloriosa is still very expensive, and my plant has been in my possession little more than a year, but it has done very well. The flower seems about the same size as the newer and also expensive William Falconer, which I have seen but have not got, and not quite so dark but a little brighter. It seems decidedly free-flowering, and I have no doubt that the flowers of well-established plants in good soil are magnificent.

N. Laydekeri rosea is now well known, and if size is not required is certainly one of the very best. The flowers change in colour from quite a light pink to crimson. It is very free-flowering, and will do in comparatively shallow water. L. lilacea I have not yet flowered. L. purpurata is of a distinct purple tint when grown strong at its best, but this colour is not so attractive as that of L. rosea.

N. lucida is a prettily shaped flower, and appears to be a good grower, though one of my plants "went back" in a mysterious manner. The foliage is prettily marked, but the variety does not seem to be very free-flowering.

N. Marliacea albida is indeed a fine plant and a fine flower; the leaves are magnificent, and with me the finest have a tendency to curl and form a rim round the edge like the Victoria regia. It is a pleasure to look into one of these great white flowers, for pure white in flowers seems always an attraction.

N. M. carnea and rosea are identical with albida in growth, foliage and manners, and are only distinguishable from each other in the finest blooms and on the closest inspection, when a little more pink can be found in rosea. It is certainly not worth while for any amateur to grow both of these. The pink tinge is most pronounced at the base of the petals, the tips being white.

N. Marliacea chromatella has, in the three plants I have, quite different manners. It has coloured and marked foliage, and the leaves are not so large, but there appear to be too many of them. It is with me a strong grower, but a shy one to flower. It may be owing to the poverty of my soil, but a number of shoots which start from the mud, intending apparently to be flowers, lose heart on the way, and so come to neither one thing or the other, but ridiculous little abortions of curled leaves. It is a pity, as the flower, which is a good though pale yellow, not so large as the Marliaceas hitherto mentioned, seems at present to be the only yellow outside the N. odorata group which I cannot grow.

N. M. flammea is the only one of the red Marliaceas that I have flowered at present, and that not strong enough to pass judgment upon. At present it seems to have no pretension to flame colour, and the plant seems quite unlike, in power of growth, the three Marliaceas first mentioned. N. Robinsoni is a beautiful bright dark red, and a finely shaped flower. At present I am inclined to place it as second only to Ellisiana in brightness and depth of colour. It seems robust, but not likely to approach the great Marliaceas in size and growth, and would do probably well in shallower water with the Laydekeri group.

N. Seignoureti seems of much the same habit of growth as the last named, but the flowers, cream-coloured passing to pink, are at present small with me, and attract but little attention amongst the larger and brighter-coloured varieties. It should be noticed that, as

it is with Roses, the flowers will not come of their true distinctive shades or even shapes till the plant is strong and the bloom full sized. Many of the red ones will seem to come all alike at first. As with other flowers, it is best to pick off the earliest buds as soon as they come through the mud, and the past flowers as soon as they fail to open in the sunshine. I give only my own experience, and others may be able to correct me.—W. R. RAILLEM.

Figs Under Glass.

Earliest Forced Trees in Pots.—The trees may be placed outdoors when the wood is ripe; but they must not be so treated if there is any doubt about this, keeping them under glass with a free circulation of air. These are important matters in which the cultivator will need to exercise judgment. In either case encourage surface roots by dressings of manure and rough loam in equal parts, adding a sixth of old mortar rubbish and a sprinkling of dissolved bones and wood ashes in equal parts. Care must be taken in the case of trees placed outdoors that they do not root from the base of the pots. Cut off all roots that have passed into the plunging material, top-dress, after which give a good watering, and they will only need water afterwards sufficient to keep the foliage in health. Where trees have to be bought, orders should be placed. The trees should have stems about a foot high, and well-formed heads, with the growth fairly thin, and the wood ripened to the points of the shoots. The best varieties for early forcing are Early Violet, St. John's, and Brown Turkey.

Unsatisfactory Trees.—Where the trees grow rampantly and produce thin crops of fruit, root-pruning should be resorted to, confining the roots to a narrow border of 3 to 4 feet width. A trench taken out at this distance from the stem after the fruit is gathered will most assuredly check the tendency to a late growth and assist in the ripening of the wood, more particularly if the growths are thinly disposed, and the points of the shoots, instead of being closely tied in, are allowed to grow up to the glass. If the drainage be defective it will be necessary to lift the trees in the autumn as soon as the leaves commence falling, and replant in fresh soil. Place in 9 to 12 inches of drainage, rough at the bottom and smallest at top, and on this lay 3 inches thickness of old mortar rubbish, freed of old laths and other pieces of wood, smashed, and sifted with a $\frac{1}{2}$ -inch sieve, using that remaining in the sieve, the finer particles being mixed with the soil to the extent of one-sixth. A 3-inch drain should be provided, with proper fall and outlet to carry off superfluous water. Turfy loam, inclined to be rather strong than light, forms a suitable compost, adding to it the one-sixth of old mortar rubbish before mentioned, and a bushel of ground coprolites to every cartload of loam. In replanting ram the compost, well incorporated, thoroughly about the roots, spreading them evenly well up to the surface, and with soil between each layer, so as not to have all the roots together. This will insure steady progressive growth, short-jointed fruitful wood, a solidified compost duly supplied with nutrient elements, securing, with judicious ventilation and management, solidified growth and large, heavy fruit. Should the drainage be good, it will only be necessary to detach the roots as advised, confine the roots to the narrow border, and remove some of the old soil from amongst the roots, supplying a top-dressing with the soil above stated.—GROWER.

Nerves in Plants.—Wordsworth's lines, says the "Daily Chronicle," regarding the faith that believes in the enjoyment by the plant of the air it breathes may find, perchance, some far-off justification—one dare not say confirmation as yet—in the researches of Dr. B. Nemec, who has published a learned treatise on the manner in which plants are capable of transmitting impulses or stimuli through their bodies from one part or organ to another. Dr. Nemec thinks he has discovered certain special features in the living matter of cells which appear to warrant the conclusion that plants possess structures corresponding to the nerve fibres of animals. The researches of Sir J. Blyden Sanderson long ago proved that the movements of the Venus' Fly-trap's leaves gave much the same electrical reactions as do muscular movements in the animal. There is no doubt that whatever be the exact source of the movements, it is to the living matter (or protoplasm) of the plant that we must look for the discovery of the real seat of the action. In old days it was believed that each cell of a plant was completely shut off from all its neighbour-cells. Now we know that, so far from this being the case, the living matter of the plant is continuous in its nature. Fine threads of protoplasm pass through the cell-walls, and bring the various series of cells into close connection. There is nothing inconceivable, therefore, in the notion that certain threads of living matter may develop the function performed by nerves in animals, that of conveying stimuli. When, too, we learn that a sensitive plant can be rendered insensible by making it respire ether, the argument can be drawn closer for the identity of animal and plant sensation.



Dwarf Chrysanthemums.

Plants growing in 4½-inch pots, from 9 inches to 18 inches high, and carrying one full-sized bloom, are not so often seen as their merits deserve, and they are certainly well worthy of what little attention they require in producing them. They further show how adaptable the Chrysanthemum is for purposes of decoration. These miniature plants are well suited for indoor vase decoration, for standing on the side stages of the conservatory where dwarf plants only are required, and for the marginal line of groups arranged for effect at the autumn exhibitions. From the first to the last week in August is the time to take the cuttings. If they are inserted sooner the plants are apt to get too tall, and if taken much later the flowers are necessarily smaller. Where Chrysanthemums are grown for the production of large blooms some of the points are almost sure to be broken off by various causes about the time stated, as for instance heavy rains, high winds, and birds alighting on them, the shoots at this stage being very brittle. Such shoots should be formed into cuttings 4 inches long; some may be 6 inches long. Dibble them firmly into sandy soil, using pots 2½ inches in diameter, water well to settle the soil securely about the cuttings, plunge them in a gentle hotbed, shading them carefully from the sun, syringe the foliage every afternoon of fine days, and by keeping the frame nearly close roots will be formed in about a month, when more air should be afforded, increasing the supply until the plants will bear full exposure without flagging. The best position for them at that stage of their growth is on a bed of coal ashes close to the glass in a frame with a southern exposure. When the pots are full of roots shift the plants into pots of the size named, using rich soil and potting firmly. Another system of producing cuttings like that previously described may be too haphazard to depend upon. Where plants are grown on the "big bloom" system with three shoots, allow them to carry four instead, and when the buds form on the shoots towards the end of August the extra shoot can be topped and the cuttings inserted. If the lower part of the same branch is cut off the plant will be none the worse for growing four branches instead of three. Where a large number of dwarf plants are required the following is a good method of preparing the stock.

Insert cuttings of desirable varieties. Any of the Japanese section that are not weak in growth nor have weakly peduncles are suitable, preference being given perhaps to such varieties as all the members of the Carnot family, also any with a semi-weeping habit of petal, in the usual way early in January. Pot the plants as required; do not top them, but train up four shoots from each plant at the first break, removing all other side branches as fast as they appear. Secure the plants to one stake during their growth. When the bloom buds form, as they will at the time named, cut off the points, insert them, and treat as advised for the others.—E. M.

Bulbs and their Culture.

(Continued from page 170.)

FOR providing an early display of forced flowers, both private gardeners and market growers depend upon pretty much the same varieties of Hyacinths, Tulips, and Narcissus, simply because only a few known sorts can be fully relied upon. There is, however, a great deal of difference between the selection suitable for each class of grower in regard to the production of flowers during February, March, and April. For the latter purpose the private grower aims at procuring choice up-to-date varieties, which produce superior and uncommon flowers, because the owners of good gardens usually like to see in them a choicer variety of flowers than are generally met with in markets and shops.

The market grower, on the other hand, limits his selection to those varieties which are likely to prove profitable. He knows that the general public prefers certain decided colours, and, that as bulb growers largely increase their stock of the varieties in the greatest demand, such can be obtained at a cheap rate; whereas the high price asked for bulbs of new varieties allows the market grower but little chance of making a profit out of them, except in rare instances. It should, however, be constantly borne in mind that flowers of new varieties, which are a decided improvement on older ones, are in great demand on the markets as soon as they can be procured at a reasonable rate, and growers are therefore often ready to

speculate in the purchase of choice bulbs before their price comes down to the usual figure of the market man.

For midseason and late supplies of Tulips the market grower depends principally upon the following varieties:—Duc Van Thol, scarlet, for which there is a steady demand throughout the season, and Vesuvius, another good scarlet. I have tried several of the more expensive scarlets, but find they do not generally sell well. Yellow Prince is *par excellence* for market work, and it is more largely grown than any other yellow; California and Canary Bird are also good, but at present they are too dear. Chrysolora is too uncertain for forcing, and I strongly advise all growers to fight shy of it. La Reine, White Pottebakker, L'Immacule, and White Swan will give a good succession of whites throughout the season. Cottage Maid and Proserpine are good rose and pink varieties. The red and gold Keizers Kroon, by reason of its great size and attractiveness, always sells well, and I know of no better orange coloured variety than Leonarda Vinci. Thomas Moore, apricot, when well grown so as to bring out its true colour, is an unique flower which sells readily, and is also a great favourite in private establishments, but when the flowers are of a dull colour, as they sometimes are if forced too hard, they are a decided libel on the real Thomas Moore.

Doubles are not, as a rule, largely grown except for late flowering. The following are some of the best:—Gloria Solis, brown and yellow; Rex rubrorum, scarlet; Tournesol, red and yellow; La Candeur, white; Le Blason, rose and white; and Rosina, pink. Parrot Tulips are not usually profitable for pot culture, because they do not bear forcing well, and flowers may be obtained from the open air almost as early as from bulbs in pots when the latter are brought on in cool structures. Everybody should, however, grow Parrot Tulips in the open air. Every variety I have seen is worth growing, but Perfecta (yellow, red stripes), is a general favourite.

The above selection is the one I recommend for market purposes, and all the varieties are also well adapted for growing in private gardens to supply large quantities of cut flowers or pot plants, but in addition the following choicer varieties should be grown when the expense can be incurred. Duc Van Thol Cochineal, vermilion; Albion, white; Couleur Ponceau, bronze scarlet; Donna Maria, striped; Le Matelas, bright pink; Orphir d'Or, yellow; Vermilion Brilliant, scented; Prince of Austria, orange scarlet; and Bride of Haarlem, striped. Darwin Tulips are good for late work, as their quaintly marked flowers are always admired. Bierens de Haan, violet and rose; Gordons, red; Glory, dark brown; Gustave Doré, rose; and Madame Grignan, rose and white, are all fine varieties.

For bedding purposes it is wise to rely upon sorts sent out in separate colours, which are guaranteed by firms of repute to flower simultaneously, as it is most disappointing to have some varieties flowering in advance of others. A similar course should also be pursued in regard to Hyacinths intended for bedding, as firms who have made a specialty of selecting send out collections which are the result of years of study.

Hyacinths when grown in pots usually flower at a time when other flowers are none too plentiful, and for that reason they deserve to be largely grown in private establishments. For market purposes they are not, as a rule, very profitable things to grow. Except for exhibition purposes it is not wise to grow a large number of varieties, as there are certain kinds which are superior to others of the same colour, and the singles are, as a rule, more attractive than doubles. Here is a selection which I think will satisfy the majority of growers, certainly they will provide a good display.

Red and rose.—Baron Van Tuyll, Charles Dickens, grand; Grand Vainqueur, Howard, Lord Macaulay, Lord Percy, Moreno, and Norma. **White.**—Alba superbissima, Blanchard, Baroness Van Tuyll, La Candeur, one of the best; La Belle Blanchisseuse, La Grandesse, Leviathan, Mary Stuart, Voltaire, and Paix de l'Europe. **Single blue.**—Baron Van Tuyll, Beauty of Hillegom, Blondin, one of the best; Charles Dickens, King of the Blues, and Masterpiece. **Single yellow.**—Bird of Paradise, King of Holland, orange yellow; King of Yellows, and L'Or d'Australie.

Among the large number of Tulips and Hyacinths catalogued there are many which, although high in price, are by no means so showy as the more plentiful varieties, but every variety enumerated in the above lists I know from experience to be of a "taking" colour.—WARICK.

(To be concluded.)

Sagittaria japonica fl.-pl.—The figure on page 219 represents parts of a sturdy plant of this very attractive aquatio exhibit by Leopold de Rothschild, Esq. (gardener, Mr. James Hudson, V.M.H.), on August 13th in the Drill Hall. We prefer the common Sagittaria (Arrowhead), with its beautiful single flowers and central mass of purplish anthers. The variety flowered from Gunnersbury was remarkable for the density and "doubleness" of the blooms. Where this plant grows luxuriantly and flowered abundantly its effect amongst other and commoner aquatics is quite outstanding. Being truly double, the mode of propagation is mostly by division. It is hardy.

The Pear.

THE flavour of fruits has been a subject that has, from a very early period of gardening records, more or less engrossed the attention of cultivators; and although there is no lack of connoisseurs, there are comparatively few who have attempted to throw much light on the cause whereby fruits of the same variety should differ in flavour when grown under similar circumstances. Yet that it does so is an unquestionable fact; and some of the cases are so self-evident that a few examples will suffice to define what is hereby meant by the term "inexplicable," or, in plain language, a case where a reason for the anomaly is difficult to assign.

Open Standard or Wall Tree.

In an orchard on grass of mixed Apple and Pear trees we have several large trees of the Marie Louise Pear, which in favourable

question for which the following suggestion may, perhaps, supply an answer.

Assuming the soil on which both the open standard and wall trees above alluded to are growing, to be exactly adapted to the wants of a fruit-bearing Pear tree (and I have reason to believe that it is so), we have here a manifest example of the evil effects of pruning and managing a fruit tree. The wall trees, of course, receive the usual summer and winter treatment; while the standards have had nothing whatever done to them except thinning-out the branches more or less severely once in six years or so, and gathering the fruit when ready. With regard to the certainties of a crop I can say but little, the one being as good as the other; and I have never seen much on the wall trees when the other failed, so we must not deduce much from that, but consider the causes of the one being so much better flavoured than the other; and my opinion on this point is that all the wall tree fruit is overfed. The tree being denuded of branches and shoots to a great extent, both in winter and summer, to make it conform to the



SAGITTARIA JAPONICA FL. PL. (See page 218.)

seasons bear well, the fruit being much smaller and more russetty than the same kind trained to eastern, northern, or western walls; but they are infinitely superior to the latter in flavour—so much so, that some have doubted their being the same variety. But the difference is entirely due to the conditions under which they are grown, for they were originally from the same stock. Another variety of Pear, Williams' Bon Chrétien, is exactly the same; large, fine-looking fruit grown on the walls being inferior in point of flavour to the same when grown on open standards, the fruit of the latter being much smaller. Now, these examples are difficult to understand on the generally received notions that cultivation, training, and other judicious management tend to produce good fruit. Certainly it is a finer-looking fruit than the other; but being obtained at a much greater cost, in smaller quantities, and of inferior quality, the question naturally arises, Is it prudent to plant Pears against a wall? To this a qualified answer must be given. At such a place as this (Haddington), most certainly it is not advisable to plant either of the kinds above mentioned; but at a place less favourable to the growth of Pears as open standard trees it may be different. Still, the question has to be asked, Why are the fruit on the walls so much inferior to the standards, the soil and climate being the same? This involves a

situation it is placed in, and the crop of fruit being seldom proportionate to the activity of a vigorous root, an undue amount of food is forced into the cells of the fruit, and it is swelled beyond its proper proportion, while sugar and the other items constituting flavour are not furnished in a like ratio; hence a full-grown but indifferently flavoured fruit is the result.

Perhaps someone will urge that the greater amount of air the standard-grown fruit receives is the cause of its merit. This may, perhaps, have something to do with it; but I am still of opinion that when a fruit grows really well in a state of nature, its quality is rarely improved by cultivation, especially when such severe measures are adopted as those taken by the dresser of the wall-grown Pear tree, cutting off, as he does, nine-tenths or more of each season's growth every year. Some fruits may benefit by a treatment of this kind, but I have much doubt of the Pear doing so, as some consideration is always due to the natural habit of the tree operated on; and when we know that the Pear in a wild state assumes an almost forest tree character, we must pause ere we seek to reduce it to the condition of a dwarf. Fruit it may bear in such a condition, and such fruit may now and then assume a more or less unnatural character, just in proportion to the paucity of its numbers; but its true character can

be hardly developed in so limited a space, and either extraordinarily overgrown specimens or sickly diseased ones will be the result where Nature has not been consulted in its production.

The above case is not the only one of a like nature that has come under my notice. Many years ago a new garden was formed in one of the northern counties, and some hothouses were intended to have been built, but something occurred to prevent their being put up at the time, and at the eleventh hour the gardener, who had planted the other walls with trees suitable to their respective places, planted some dwarf Ribston Pippin Apples against the south wall intended for Grape houses, expecting they would be removed the following year. But delay after delay in the building of the hothouses occurred until the trees came into bearing, and most beautiful fruit was the result—fruit that carried off the prize at a provincial show, and, I believe, would have done so at a metropolitan one also by its appearance; but this fruit was of indifferent flavour; the place was in a certain sense too good for it, in the same manner as the south of Europe is too mild and warm for the Apple in general. Some other instances of a like nature might be adduced; but as my object was merely to call attention to the Pear, it is needless recording more.

It is proper to observe, that in soils and situations less favourable to the Pear than here, the differences between the open standard and wall-grown Pear might not be the same as it is here; but where it is similarly suited to the growth of that fruit, I expect the result will be the same. A healthy aged Pear tree is in a more natural condition to bear good fruit than one that is continually undergoing amputation of full three-fourths of its entire framework. A gouty habit may tend to swell the fruit of the latter to an unnatural size, but it must be at the expense of the sugary matter which gives flavour and quality to it, as it is exemplified in some other fruits that are more gross feeders, atmospheric influences being also at work in both cases alike; but as the Pear is not generally regarded a gross feeder, it is less likely to run into that condition in the enlargement of the fruit as it is to fail in producing that perfect one which meets the palate of the connoisseur. Be this as it may, certain it is that the finest-looking fruit are not always the best flavoured, Pears especially being more deceptive in this respect than other fruits.—J. R.

Draycot House, Chippenham.

DRAYCOT stands in the midst of an extensive, heavily timbered, and beautifully undulating deer park, and, unlike many similarly large mansions, has its outer walls clothed with a wealth of sweetly scented deciduous and evergreen trailing plants, notably the Wistaria and Honeysuckle, both of which flourish wonderfully. These produce in their season a great wealth of blossom, that must pervade the rooms with pleasant perfume through the open windows. For some years Draycot has been the residence of H.H. Prince Hatzfeldt, and during that time many important improvements have been carried out, particularly since Mr. Bible has been in charge of the gardens and grounds. The latter are much diversified in character, there being shady woodland walks, extensive lakes and rivulets, open lawns with fine specimen trees, and a wealth of flowering shrubs, Roses, and herbaceous plants. The latter have not been long planted in quantity, but such growth I have not seen elsewhere, and, needless to say, the flowers of varying kinds were superb. Roses, too, included rambling sorts and dwarf kinds, Tea, Noisette, and Hybrid Perpetuals in great quantity and magnificent quality, the favourite Maman Cochet at the time of my visit being in superb form. The Rose and herbaceous garden is situated about midway between the house and kitchen gardens, the latter flowers skirting the outer boundary of the lawn in serpentine borders. Rose beds of informal shapes have the greensward as a foil; flowering shrubs have large beds set apart for them, in which Rambler Roses are planted here and there, and allowed to scramble over the heads of other trees at their own discretion. Needless to say, the effect from every point of vantage is very fine.

The woodlands are sufficiently dense to give a beneficent shade, but not so much so as to interfere with the undergrowth of shrub and flowering tree, which grow very freely here. In the spring, too, Daffodils and Narcissus are a feature, and, apart from their landscape value, afford material for cutting in quantity. Wild fowl are both numerous and rare, and the great expanse of water, with their islands, extend through the whole extent of lawn. A massive ornamental bridge spans this at a convenient point, to connect the principal carriage road through park and lawn. Waterfalls, both rippling and torrential, add much to the interest of the grounds, the foam and spray rising from the one in its hurried passage contrasting prettily with the rippling water passing over an uneven stone bed sloping to the small rivulet beyond, and both in close contiguity.

The house itself stands on a high elevation, and takes in a broad extent of landscape views, sloping banks and terraces, relieving somewhat the sharp gravity of the lawn closely contiguous to the house and

lake. The conservatory is a large and lofty structure, a smaller wing at the extreme end serving as a tropical aviary. *Cobaea scandens variegata* planted in the side borders ascends to a great height and depends from lantern to the floor in graceful profusion. The variegation, too, seemed unusually bright and clear. The south front of the structure has narrow stages provided for pot plants; beneath these Mr. Bible has succeeded in concealing from view the hot-water pipes by a deft arrangement of rockwork and Ferns of varying kinds, and thus removes what was a perennial eyesore. It is found, too, that this does not interfere with the heating of the structure, nor the growth of the plants, but both proceed in happy unison, provided ample water is given.

Within recent years the glass department, situate in the kitchen gardens, has undergone considerable improvement, old structures giving place to new, with a corresponding convenience and return in produce. Excellent plant houses, a fine Peach house, and connecting corridor, takes the place of old pattern and isolated structures that had but little to recommend them. Draycot was once famous for its Grapes, but by changes of management and time passage this distinction was allowed to lapse. The prospect, however, under Mr. Bible's skilful supervision, seems likely to be revived at no distant date; crops, as I saw them in early summer, were very promising. Black Hamburg and Madresfield Court were perfect in every detail in former times; the same kinds now are progressing, as are others, such as Buckland Sweetwater, Muscat of Alexandria, Alicante, Lady Downe's, Foster's Seedling, Gros Maroc, Lady Hutt, and the uncommon Strawberry Grape, the latter being finer in berry and colour than usual. Peaches and Nectarines were this year light in crop, but very fine in fruit, the growth of the trees being all that could be desired. Melons do well here too, the soil evidently suiting them well, the fruit growing to a large size, and canker in the stems practically unknown. Frogmore Orange, Royal Jubilee, Countess, Triumph, and the Musk Melon of America are some that are grown, the latter being a great favourite on account of its rich flavour. Tomatoes in 9-inch pots were excellent; seldom have such crops been seen this year, individual fruits weighing over 1 lb. each, averaging forty to the plant, Eclipse, Sutton's A1, Sunbeam, Perfection, and Bible's Hybrid being the varieties that are grown.

Chrysanthemums are grown to the number of about 750, mostly Japanese and incurved. With these Mr. Bible is a keen enthusiast, and their attention draws largely on his spare time. As we saw them just after the potting, they gave one the impression of being in a very happy state, and full of promise for the autumn months. Many new kinds are included, as also are the older among the incurved section—the Queens—now by many discarded. Mr. Bible has much faith in March-struck cuttings, and their strength and general character certainly gave one a very favourable impression, compared with the earlier-rooted stock. The object, however, of the spring-struck plants is to provide material for furnishing the mansion, small pots with large specimen blooms being a desideratum.

The 4 acres of garden within the walls, despite the light rainfall and the gravel understratum, was without exception excellent, fruit, border flowers for cutting, and vegetables occupying every available inch of space. Young trees of Apples, Pears, Plums, and other fruits are being freely planted to replace old ones and to extend the supply of summer and winter fruits, the best varieties of each being selected. Cordon trees replace some of the worn-out fan-trained specimens, and new espaliers fringe the vegetable quarters. Strawberries fruit abundantly, and are also excellent in colour. Royal Sovereign is the greatest favourite, both for pots and open ground, as a maincrop. Vicomtesse H. de Thury are grown to supply the earliest dishes. For forcing they occupy 48-sized pots, and both these and Royal Sovereign were unusually rich in flavour and colour, and extra large in berry. Raspberries, like the Strawberries, were equally satisfactory, the crop this season being really prodigious. Cherries, Plums, Peaches, and Apricots furnish a portion of the walls, and all do well, and Cherries in particular.

A splendid water scheme has just been perfected by the Prince Hatzfeldt, which will be a permanent boon to the garden. Pumps driven by steam power force water from the lake tributary into a large iron tank elevated above the garden level, and from this it gravitates to given points of convenience about the garden. Previous to this the hauling of water was a costly item, but now there is an abundant supply, well distributed, that cannot be other than satisfactory to everyone.

Neatness and good order is made by the Prince a predominant feature, and in this evidently Mr. Bible is as keen as his noble and generous employer, and when it is remembered that the supervision of the parkland is carried on jointly with the garden, it clearly proves Mr. Bible's capacity for hard work. Every department shows marked progress since he has had charge, and the demand of the mansion is during the Prince's residence, a heavy one, for plants and cut flowers in particular, and fruit and vegetables not much less so; but apparently the supply seldom falls short of the demand, judging from the extent and variety under cultivation.—TRAVELLER.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

THE Edinburgh notes furnished under this heading a fortnight ago were abruptly truncated; they referred to the Edinburgh Botanic Garden, and particularly to the new Bromeliad and Aroid range erected therein. Entering from the west porch, where, on one side stand a bed of seedling Callas from *C. Elliottiana*, and on the opposite side a well-flowered selection of Cannas, one opens the door leading through to the tropical atmosphere, wherein grow the Nepenthes, Alocasias, Marantas, Hedychiums, and other genera in rampant luxuriance. There is a central path running the whole length of the structure. On either side are the borders, for everything is planted out. The path is formed by iron gratings, beneath which are the hot-water pipes, consisting of five flow and five return pipes of 4-inch bore. There is thus abundance of heating surface. Messrs. Mackenzie & Moncur erected the range.

The borders are perhaps each 10 feet broad, and the planting of them has purposely been done with a view to the best effect. Some of the Nepenthes groups are many yards in circumference, and tree roots and stumps have been set in for the growths to clamber over. From the walls at either side other species of these Pitcher Plants are seen to rise up and clothe the wires under the roof just in the way that one frequently finds *Gloriosa superba* doing. Such magnificent groups, and so robust and rude in health, are sufficient to attract great interest. Of course there are also many others of the genus in baskets, which depend from the roof in the orthodox manner. Around the Nepenthes are specimen plants of the Aroids I have already mentioned, together with such lesser known subjects as *Brachychilum Horsfieldi*, *Ravenalia guiensis* (somewhat like a *Musa*), also *Clinogyne grandis*, species of *Piper* or *Pepper-plant*; *Heliconias*, notably *psittacorum*, and *Heliconia illustris rubricaulis*. *Burbridgea nitida* is a dwarf little plant, not unlike a young representative of *Phyllostachys Marliacea*. *Anthurium crystallinum*, *A. Veitchi*, and numerous handsome varieties of *A. Scherzerianum* are in groups or as specimens. *Philodendron Wallisi*, *P. verrucosum*, and the noble *P. imperialis* are amongst others of the most prepossessing plants of the collection. One could go on compiling a long list of plants of varying characteristics, but save for the eyes of those whose duty it is to read and consider notes of new or rare plants, that the same may be inquired about with an aim of placing them through the commercial mill, such a list might be of little service or interest to ordinary readers of these notes. Suffice, then, to state that the collection is large both in number of genera and species and their duplications, and anyone in the precincts of Edinburgh would do well to visit the Botanic Gardens, if only to run through the Aroid house.

Beyond the latter division is the house devoted to Bromeliads, which embrace *Screw Pines*, *Tillandsias*, *Billbergias*, *Dyckias*, &c. These are planted out, and are surrounded by sandstones. Here again the general effect has been studied, though the species of a genus are generally all grouped by themselves. Thus all the *Æchmeas* are in a group and separate from *Karatas*, *Pitcairnia*s, and other things. There are one or two beautiful *Ananas sativa variegata*, *Quesnelia Wittmackiana*, *Jatropha podagrica*, *Guzmania leopardina*, and some other members found here, are to be included among the lesser known plants of our gardens.

In a separate division of the same new glass range are a number of the newer Java hybrid *Rhododendrons*, sent out by the Messrs. Veitch of Chelsea. They are succeeding admirably, and have flowered freely and consistently.

The Fern houses I believe, will soon be abolished and new structures erected in their place. It is time they were renewed, for beside the newer portions these old houses and their contents are miserable indeed. The Palm house, with its numerous occupants, was very pleasing, the quality of the plants and general cleanliness of everything—house and stock—reflect credit on those who have charge and on the superintendents. The same remark applies to the Orchid and succulent houses, both of which contain large and interesting collections.

Out of doors cleanliness is more than ever the order of the day. The Director, Prof. Bayley Balfour, has introduced many changes in the aspect of the outdoor portions during the last ten years, having levelled and smoothed off a very large area of the grass lands immediately around the houses. Even large forest trees, 50 feet or more in height, have been lifted, and in some cases removed to far distances and replanted. They are now healthy and in vigour. The newly planted Rose garden is specially attractive, though more might be done to establish *Ramblers* Roses and *Briers* in some sort of dell, which could easily be made between the rock garden and the little lake or pond. I will conclude these notes with a list of choice shrubs, which the Professor has had on trial around the wall which skirts part of the herbaceous grounds. Most of them are very rare in Scotland, and on that account are the more interesting. With careful treatment and watchfulness during sharp and frosty periods of the winter these shrubs ought to be as successful at Edinburgh as elsewhere. The list will include *Berberidopsis corallina*, a very handsome plant when in flower; *B. Fortunei*, *Aristolelia Macquii variegata*, *Escallonia exoniensis*, *Holboellia latifolia*, chiefly useful as a foliage subject. There are also *Lonicera japonica reticulata aurea*, *Plagianthus hetnlinns*, *Elæagnus pungens anrea picta*, *E. macrophyllus*, *Camellia theifera*, *C. maculata*,

Lupinus arhorens, *Escallonia ruhra*, *E. montevidiensis*, *Teucrium fruticosum*, *Caryopteris mastacanthus*, or *Blue Spiræa*; *Magnolia compressa*, *M. acuminata*, &c. *Akebia quinata*, *Arrotia persica*, *Rubus melanolacius*, *Cercis Siliquastrum*, *Lonicera Standishi*, *L. angustifolia*, *Jasminum humile grandiflorum*, *Perowskia atriplicifolia*, and *Hamamelis arborea*, the curious and very beautiful early flowering *Witch Hazel*. *Vitis Coignetia* also succeeds splendidly, and so too, does *Carpentaria californica*, *Chimonanthus fragrans*, and a number of the very showy Japanese *Acers* (*Maples*) all out of doors.

Prunus persica is also on the wall, but does not appear very happy. *Photinia serrulata*, the Chinese Hawthorn, is here, and *Tamarix odessana*; also *Stephandra tanakæ*, *Neillia Torreyi*, *Potentilla Reidrichseni*, *Kerria japonica*, *Mallotus japonicus*, *Acanthopanax sessiliflorum*, *A. ricinifolius*, *Cistus cyprinus*, *Prunus triloba*, doing well; *Periploca græca*, *Buddleia intermedia*, *Ceanothus aznrens*, *Eucryphia pinnatifolia*, *Robinia Pseud-Acacia*, *Andromeda arborea*, and *Colutea cilicica*. So with such a list as the above on trial the Edinburgh folks ought to discover something that will succeed and become popular. Such a number of the rarer shrubs can probably not be found in any Scottish nursery—which does not say much for the nurserymen.

Messrs. Dobbie & Co., Rothesay, N.B.

It is highly agreeable when one can combine pleasure with business, and anyone bent on a business visit to Dobbie's nurseries at Rothesay cannot but participate in the pleasure of a delightful steamboat sail down the Firth of Clyde, amidst scenery renowned far and wide for its grandeur. It requires but two hours to reach Rothesay from Glasgow, taking rail to Gourick or Wemyss Bay, thence a steamer to Rothesay, on the Island of Bute. The latter, of course, forms one of the Scottish counties.

From "Spion Kop," a name recently bestowed on a rugged little eminence which dominates the highest ground included in the firm's area, the visitor can survey one of the grandest panoramic views of mountain, wood, glen, lake, river, sea, and township that could surely be found anywhere in our own "tight little isles." Rothesay and Rothesay Bay have been, and will continually be, the subject of song and story throughout Scotland.

Amongst such surroundings as these, are the magnificent nurseries of Messrs. Dobbie & Co. Their ground is mostly on gentle slopes, though some of it is more abrupt than gentle, and well exposed to sun and weather. The acreage amounts roughly to sixty, of which many are devoted to *Roses* of all sorts, but florists' flowers are well known to be the specialities of this western firm. Thousands of *Dahlias* are at present in bloom, together with such beds of *Violas* in full blaze as would make the untravelled gardener pause in open-mouthed wonder. The herbaceous borders are truly amongst the finest in point of their superior variety and the excellence of the occupants contained in them, that anyone may expect to see in any commercial nursery.

It is not my intention to go into details; from what is written the reader must imagine how much more could be written, and all worthy of being expressed too.

Sweet Peas were the first subjects of inspection, and here were the most recent varieties, to wit, *Miss Willmott*, *coccinea*, *George Gordon*, *Lady Ormsby Gore*, and *Hon. Miss Edith Kenyon*, which is paler than *Mrs. Eckford*. It is rather unusual to see Sweet Peas so heavily mulched as the rows were in this instance. The reason lay in the fact that the past summer has been uncommonly droughty, and that the Peas were sown on a steeply sloping "brae" in anticipation of the usual "dreeping" summers that are characteristic of Rothesay. Besides these recent novelties, all the finest exhibition Sweet Peas were noticed.

Dahlias, of course, are the speciality of specialities here. The novelties of last year are grown side by side along the length of one long border, chiefly to submit their merits for the close inspection of the numerous visitors which at this season find their way to these Rothesay nurseries. I noted one hundred plants of the new *Lord Brassey*, and one hundred of *Lord Roberts*, besides which a block of nearly an acre was pointed out, and every variety included in that space was of the latest introduction. At the northern shows the Messrs. Dobbie & Co. have been staging cut *Dahlia* blooms for the last two months, and soon we will have collections sent south, which will speak for themselves.

Amongst hardy herbaceous plants most worthy of being brought specially forward for consideration are *Heuchera brizoides* and the various varieties of *H. sanguinea*. *Delphinium Blue Butterfly*, either for bedding or for the produce of cut flowers from the open border, is one of the finest introductions of recent years. It comes readily from seeds, and a packet should certainly be obtained when the next seed order is being made out. *Verhena ericoides alba* is a pretty white-flowered variety, annual in its nature, and not unlike the pretty *Nycteria*, so useful amongst annuals. *Salvia argentea* is peculiar, interesting, and handsome, having huge leaves swathed with silvery hairs. *Oenothera M. Cuthbertson* is also good in its way; and those who have not *Platycodon grandiflorum* should give it a trial. It is a robust plant, with violet-blue flowers much like enlarged flowers of *Campanula trachelium*. Besides these few subjects brought to notice, one could refer to numerous *Sidalceas*, *Tradescantias* (whose value for cut flower uses has yet to be recognised), *Geraniums* of the true

herbaceous nature, Phloxes, Hieraciums, Eryngiums, Bocconia cordata, and many other handsome border plants. Anyone who has seen the magnificent collections of hardy cut flowers staged by Scottish nurserymen at the more important horticultural shows, will readily understand how fine the borders must be from which these collections are culled, and at Rothesay these typical borders are numerous.

Coming to Roses, what do you think when I say that Sunset, Sunrise, Mrs. Mawley, Liberty, Clara Watson, and other of the new and most refined Roses have already become established in open-air quarters, and on well-exposed ground, too? Each and all seem to be doing well. At the time of my visit in August, budding was in full operation. It reflects the greatest credit on Messrs. Dobbie & Co. that they are able to show the stranger these fine Roses already in such grand form in their possession. Without attempting to enumerate the novelties, attention may be directed to the proper catalogues issued by the firm, wherein the planter will discover details to satisfy him or her.

Lastly, I should like to refer to the show strains of Marigolds of all sorts. The blooms on some of the plants were enormous, and must certainly have thrown some of our northern patrons of these very stiff flowers into ludicrous rapture. By feeding, and a careful system of disbudding, flowers of massive proportions, evenness, depth, and purity of colour are produced. The selection is great, for "Dobbies" have trained their attention on the genus for years past. It is also so with the autumn-flowering border Phloxes; a wide selection of the most handsome varieties are always obtainable. The Violas I have already alluded to. In August some thousands of cuttings had already been inserted. The earliest of these will be rooted and ready for disposal by October, but those cuttings put in after the middle of August provide young plants for the execution of spring-time orders.

The cosmopolitan character of the business carried on is evidenced when one begins to write of their Potato trials, and of various other vegetables. These are all included in their proper section. Tomatoes in pots under glass are represented by forty-seven varieties, grown for seed purposes and for show fruit. Dobbie's Champion and Dobbie's Improved Conference, together with Laird's Supreme, are three of the best for general uses. Under glass we also find Fuchsias, Cannas, Zonal Pelargoniums, Tuberoses, and Begonias in imposing and liberal array.—WANDERING WILLIE.

Cucumbers.

THE recent hot weather has favoured alike the consumer and grower, the demand for fruit being brisk and the supply adequate. In order to maintain the successional supply of fruit unbroken the grower must look ahead, and take steps in accordance with external conditions, for the days become shorter and the nights colder, therefore the house must be closed earlier, syringing done earlier, every advantage being taken of sun heat, and the precaution to prevent excess of moisture on the foliage and fruit during the night. In cold weather, especially wet, fire heat becomes necessary to secure clean straight fruits without damping or twisting at the "nose," maintaining a temperature of 70° to 75° by day, and 65° to 70° at night. Allow the heat to rise to 85° or 90° from sun heat, and close so as to secure the latter temperature to 95° or more for some time in the early part of fine afternoons. Encourage surface rooting by top-dressing with lumpy loam and sweetened horse droppings, and sprinkle a handful of soot on each square yard of bed. There is nothing like young plants for producing clean straight fruit. The plants will require stopping to insure an even spread of foliage, and on the corresponding bearing growths keeping tendrils and male flowers removed.

The plants from seed sown early in August will be ready to plant out at the beginning of September. The house being a light one, the heating must be adequate to maintaining a temperature of 70° to 75° in all weathers, with a bottom heat of 80° to 90°. However, first of all thoroughly cleanse the house, removing every particle of old soil, and scalding the interior with boiling water, then wash the woodwork with paraffin, soft soap, or carbolic hard soap, cleansing the glass with clear water, limewashing the walls with hot lime, and a small handful of flowers of sulphur in each pailful. If rubble is used about and over hot-water pipes for bottom heat, see to cleansing it by taking out and scalding. Make the drainage secure with a layer of turves, previously charred or scalded. Put in hillocks or ridges of soil 2 feet wide at the base, 10 to 12 inches deep, and 1 foot across at the top. Turfy loam laid up until the grass is killed (and with it 14 lbs. of basic slag phosphate and 7 lbs. of kainit per cubic yard), chopped up rather roughly, two-thirds; fibrous sandy peat one-third, chopped or torn up, rejecting any woody matter; old mortar rubbish one-sixth, freed from laths and other pieces of woody substance, the rough broken small, form, thoroughly incorporated, a suitable compost. Being neither wet nor dry, it may be made moderately firm.

Plant when the compost is warmed through, press the soil gently, and secure the plants to stakes reaching to the trellis. Rub off the

laterals to the bottom wire, and stop the leading growth at about the second or third wire of the trellis.

Where seed was not sown in August, and Cucumbers are required at the new year onward, sow early in September. The varieties of Cucumbers are legion; none is better than Improved Telegraph, Rochford and Cardiff Castle being excellent. Snow's Winter, a very old variety, and seen in the Syon House type, may not be procurable, otherwise it has no equal for swelling in the winter months. Sow the seed singly in small pots a little more than half filled with soil, and cover about half an inch deep. Keep the plants near the glass, and earth them up as they grow, and transfer to 5-inch pots when they need a shift, placing a stick to each, to which secure the growth as it advances. Train with one shoot by rubbing off the laterals as they show. The plants will be fit to plant out during the first fortnight in October.—G. A.

Cottage Gardens and Gardening.

MOST of us have heard of Port Sunlight, "the model village," inhabited by the employés of Messrs. Lever Bros., and which is situated near by Liverpool. Each family, we believe, has a house to themselves with a garden attached. The whole village is a perennial source of pleasure to the visitor, and from the following report of the recent flower show held there we see how much good the Messrs. Lever Brothers are endeavouring to do; would that other philanthropists or capitalists might interest themselves to a like extent. At this show something over 300 prizes were offered, the most interesting section being the purely village competitions for the best kept allotment, the best kept back yard, window boxes, flower borders, and the most neatly kept house. The back yard display was also good, cultural skill and discretion in choice of plants having caused several unpromising plots to blossom like the Rose. The first prizewinner, Mr. J. Darby, has evidently instilled his family with the love of flowers, for one of his daughters, Miss Jessie Darby, had in the show one of the most beautiful bouquets of wild flowers, and a little son also exhibited in a similar class. The operations of the society are very wide, as was demonstrated in the display of flowers, fruits, vegetables, live stock, and knitting and crochet work, and in every department the exhibits were entirely creditable. Most of the classes were open to cottagers and amateur gardeners within a radius of four miles from Port Sunlight, but there were several for all comers, while the housework, baking, and similar classes were confined to the villagers.

Mr. W. H. Lever, president of the society, in declaring the show open, said it was far away the best they had ever held. Speaking of gardening as a recreative occupation, he said the raising of produce was not really the main object, but to provide relief after one's daily toil. He knew of no better way in which a man could obtain pleasant relief than by working in the garden, but it must be his own garden, and he must do the work himself (hear, hear). There was no better specific for obliterating the worries and harassments of the business day. In cultivating plants the great thing was to put them in the right place. The Heather from the wild moor would not flourish in the garden, and the delicate plant from the garden would perish on the moors. Flowers were like humanity, they responded readily to proper treatment, and if one felt at times that some person had not responded cordially to something done for him, there was comfort in the thought that he had not been dealt with in the correct way; and so gardening would produce a philosophic frame of mind, and exercise an effect morally and in health. The man who cultivated his garden was doing as much good in his place as the soldier fighting abroad for his country. He was serving his country, helping to make it respected, and maintaining its dignity quite as much as the warrior. Each was in his own place. Curiously enough they would find in history that the periods of our country's greatness were just those periods when the value of gardening and tilling the land were properly estimated, and when those occupations had fallen into disuse the prestige of the country had declined. It would be a good thing for the nation if every man could and would cultivate his little plot of land. All need not utilise their plot for the same purpose; some might grow flowers, and others poultry, but if each had a bit of land to use it would do more to raise England than all the shouting and shrieking about war, although this might be perfectly right at the proper time and in the proper place. The question of the house itself he was not discussing, for a few creepers would beautify a house more than any architectural work. Nor would he join in unqualified condemnation of the so-called jerrybuilders. They did their best, often under difficult circumstances. But what he wanted was that every house should have a plot attached in which that householder could occupy his spare time, and help to make the home beautiful. He would like to see a law that no house should stand on less than 400 square yards of land. In Port Sunlight they appreciated that, and knew what advantages it possessed. In regard to the show, it produced healthy emulation, and, although a man did not win prizes, he knew that his garden was all the better for the competition, and his life was all the better for the garden (applause). In conclusion, he congratulated them upon the fine display, and declared the show open.

Art in the Conservatory.

THE handsome illustration on this page is one of the prize photographic exhibits of the Agricultural and Horticultural Association, to whose kindness we are indebted for the use of the block. It

artistic interest to this phantasmagoria of natural and artificial elegance. Specimen Rhododendrons, Phyllostachys, Camellias, Roses, Titouchinas, and a host of dwarfier subjects are excellently adapted for such a conservatory, while on the roof one could train Abutilons, Loniceras, especially the Trumpet-Honeysuckle, *L. sempervirens*. Fuchsias might also be used, and *Plumbago capensis*, *Swainsonia galegifolia alba*, *Clianthus puniceus*, for the lower parts, together with



NATURE UNDER GLASS.

represents the interior arrangement of a spacious conservatory attached to a palatial residence, and may stand as a model how such capacious crystal structures can be most effectively furnished, so that the full grandeur of their appearance may be developed. We see great electric arc lights depending from the high-arched roof, and seemingly a handsome representation of a Venus statue furthermore adds

Hibbertia dentata, *Maurandia scandens*, *Solanum Seaforthianum*, and *S. Wendlandi*, *Tacsonias*, *Passifloras*, *Clematis*, *Hidalgoa Wercklei*, and who knows what else besides.

Ferns can be dotted on the stages, and where these are broad a great variety of foliage and flowering plants can be splendidly arranged in masses or in mixture.

NOTES & NOTICES

"Mistakes in Orchard Management."—The lecture delivered by Mr. Ettle on the above subject before Fellows of the Royal Horticultural Society in London last year, has now been printed and issued in booklet form.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, September 10th, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 P.M. A lecture on "The Origin and Development of the Cactus Dahlia" will be given by Mr. C. G. Wyatt at three o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, August 27th, twenty-four new Fellows were elected, making 730 since the beginning of the present year.

Fruit Yield.—In south-west Cambridgeshire, as in certain parts of Kent, cultivators are looking for their harvest as much to the fruit orchards as to the cornfields. In a few days the heaviest of the Green Gage harvest will be over, but some idea of the crop may be gathered from these figures, for the two small villages of Meldreth and Melbourn, conveniently situated, with the railway station between them. On two days lately the consignments of Green Gages from this small station amounted to 30 tons a day, while one week's return from the same station gives 140 tons of Green Gages, with 90 tons for a previous week. The consignments were chiefly for the London market. Prices have not ruled high, but have been fairly satisfactory considering the abundance, and it is stated that purchases for the exporting of Green Gage jam to South Africa have of late improved prices.

Returns from the Shrewsbury Show.—At the recent show, held by the Shropshire Horticultural Society at Shrewsbury, no less than 30,000 passed the gates on Wednesday, the 2s. 6d and 1s. day, and over 60,000 on Thursday, the 1s. day. The tickets sold at a reduced rate before the show represented in value £650. The money taken at the gates on the first day was £930, and on the second day £1690 making the total receipts of the society, without entrance fees from exhibitors, £3270. The music was provided by three first-class military bands:—The Royal Horse Guards Blue, the Grenadier Guards, and the band of the Royal Marines (from Portsmouth). Besides these there were two local military bands. Since its establishment the society has expended out of its profits over £5000 in local public improvements. This shows what a town of 30,000 inhabitants can do in the West Midlands in the way of flower shows.

Chiswick Gardens.—From the state of the vegetable and fruit crops during the past summer it has been evidenced that neither the soil, nor skill in culture, is played out in the gardens of the Royal Horticultural Society at Chiswick. Culinary Peas were such, in their season, as would have made the heart of a Beckett (not Thomas à Becket, though!) or a Simpson palpitate with continual pleasure. The Brassicas, Lettuce trials, and indeed all the vegetable section, were remarkably luxuriant. Yet the summer has been phenomenally droughty. Now, too, the Plums are a sight to behold, as any Fellow may have seen for himself or herself on visiting Chiswick recently. Many of the trees are yet bearing their crops, though last week Mr. S. T. Wright was busy preparing his report on their condition, and, having completed that, the crops will very speedily have to be removed. McLachlan's Gage Plums Diamond Monarch, Reine Claude de Comte Hatham, Victoria, and others are perfect models in respect of their crops, cleanliness, vigour, and shapeliness. The Great Vinery with its thirty odd varieties of Grapes is bearing more heavily than during the last few years, and the young wood that is being encouraged is stout and firm. The house of Mincats and the small hip-span devoted to Gros Colman are likewise well fruited, and bearing bunches which are likely to finish perfectly. Figs in pots are bearing still, and as the Chiswick collection is perhaps the most numerous as regards the number of its varieties of any in the country, Mr. Wright is able to tell the merits or otherwise of all known sorts. In all parts the crops are in a very satisfactory condition, and a profitable half-hour could be spent at Chiswick by any of our country cousins now up in London.

Seedling Apples for Grafting.—It is claimed that fully 90 per cent. of the Apple tree seedlings used in the United States for grafting purposes are grown near Topeka, Kans. Shawnee County, Kans, is said to now have at least 600 or 700 acres devoted to the growing of these seedlings.

Shade Trees in Paris.—Half a million shade trees are reported to have been planted in Paris within the past decade, and £20,000 a year is spent to keep them in order and to plant new ones. Every street of a certain width is entitled to a row of trees on either side while every street of a certain greater width gets a double row.

Preservation of Wild Flowers.—The committee formed, in connection with the United Devon Association, for the special preservation of Ferns and wild flowers, have issued a notice, which is now being freely circulated, warning "all whom it may concern," that they will be prosecuted if found engaged in the "illegal removal of roots of Ferns, plants, and wild flowers from the lanes, hedges, and fields of Devonshire."

Appointments.—Mr. George F. Glen, who was for upwards of eight years head gardener to Earl Fitzwilliam at Wentworth, Yorkshire, and latterly with the late D. Larnack, Esq., at Brambletye, Sussex, has been appointed head gardener and superintendent of Reserves, including Botanical Garden, City of Wellington, New Zealand. * * Mr. Dinne, a present Kewite, as head gardener to — Philpot, Esq., of Croydon and Teneriffe. Mr. Dinne assumes his charge at Teneriffe.

Sweet Lavender.—The Chaplain to the Forces at Shorncliffe writes to ask for Lavender for the army. He says that at this time of the year most of the good folks who are fortunate enough to possess it are picking their Lavender. Gifts of Lavender or small muslin bags filled with it would be gratefully received for the soldiers to be given away by the chaplains and scripture-readers in the military hospitals. Parcels should be sent to Miss Puckle, the Hollonds, Langton, Tunbridge Wells, who will forward them to the different military stations for distribution. The loose Lavender will be made up into little bags.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighbourhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

South-Eastern Agricultural College, Wye, Kent.—The summer course for teachers at the South-Eastern Agricultural College, Wye, concluded on August 30th. It began on August 15th, and was attended by thirty schoolmasters from the counties of Kent, Surrey, and Worcester. The object of the session was to develop a scheme of instruction suitable to the children of a rural elementary school, and the course, which dealt with the plant, air, water, and soil, had been previously put to a working test in the Wye elementary school during the past two years. The lectures were followed up by practical work in the laboratory, garden, or field, so that the teachers could familiarise themselves with the construction of the necessary apparatus and the conduct of suitable experiments. Other instruction dealt with the management of school gardens, and the preservation and mounting of specimens of Grasses, weeds, injurious insects, &c., for use in school demonstrations. There were also classes dealing with the management of fruit trees, bee and poultry keeping, the elements of land measuring, and in the evenings of one week a course of lectures was given to illustrate some of the recent advances in chemistry. Excursions were made to Canterbury, to Richborough, and the Stonor Marshes, to see both the Roman remains and the varied flora of that district, and, again, to the series of interesting geological sections in the neighbourhood of Wye. Though a course of instruction in practical agriculture did not form part of the session, the teachers were conducted round the college farm, and had its management and live stock explained to them.

Kewites and gardeners in the West of London will be pleased to learn that Mr. Geo. Massee, F.L.S., the Kew fungologist, will deliver a series of lectures on "Fungi," at Chiswick, very shortly.

Lady Warwick Hostel.—The annual report of the Lady Warwick Agricultural Association for Women appears in full in the "Woman's Agricultural Times" for September, copies of which can be obtained by addressing Lady Warwick's Hostel at Reading.

Horticultural Directory.—We return thanks to many respondents who have sent notice of their own or their friends' altered addresses for insertion in the coming edition of the "Horticultural Directory." We believe that after this date this will be the only gardening directory published.

Variorum.—The very fashionable Panama hat is made from the leaf of *Carludovica palmata*, and not a grass at all, as is commonly believed to be the case. * * The Consul at Frankfort, Germany, has notified the State Department at Washington that the agricultural societies of Italy will pay a prize of 193 dols. for a reliable method of ascertaining the quality of sulphur and of mixtures of sulphur and sulphate of copper most effective in the use against plant diseases. * * The hog is a necessary adjunct to every orchard. Turn the wormy fruit into pork, or better still, have no worm fruits at all. * * According to a U.S. fruit journal, a new Nut tree, the Queensland Nut, is being introduced to America. It is a highly ornamental evergreen tree, that produces within a very hard cover an edible nut of good quality, which it is thought will greatly improve by cultivation.

How a Frenchman Protects his Mushrooms.—Those lucky persons who are the possessors of fields and woods wherein, at this season of the year, that delicacy of the table, the Mushroom, makes its sudden appearance on every mild morning, will be interested in the manner in which a French savant protects his Mushrooms in the Meudon woods from the greed of the pilferer. Every few weeks, says "The Westminster Gazette," he causes a news paragraph to appear in one of the most popular Parisian papers, to the effect that yet another poisoning case has been traced to the eating of Mushrooms from the Meudon woods. The paragraph is differently worded each time, but as a rule it is "a whole family" or "a large number of persons" who have made themselves desperately ill by eating of the said Mushrooms. Occasionally there is a lugubrious ending, in which it is doubted whether madame, or mademoiselle, or the little boy who partook of the meal will recover. The result is that the learned owner of the woods has now never to complain of being bereft of the fungi that he loves.

The Swift.—In towns, or other places where large buildings or lofty towers afford these birds the kind of shelter in which they so especially delight, they linger for about three weeks longer than others in country districts. This largest of the swallow tribe is really a tropical bird, and this appears to be the reason why it can only endure to be with us during the hottest period of our year. It arrives about the middle of May, and often leaves at the end of July, though its stay, as already observed, is frequently prolonged to the close of the present month. Its black plumage and shrieking cry associate it with ill-omens in the minds of the superstitious, whence arose its name of the devil and the black martin. The extreme lightness of its body, and the great expanse of its wings—for the first weighs but 1 oz., and the latter measure 18 inches across—render it the most untiring in its flight of any bird visiting our climate.

Salisbury Crags, Edinburgh.—The Corporation of Edinburgh are very jealous of the beauty of their public buildings and of the general aspect of the City of Edinburgh. They do not cast their eyes around Salisbury Crags however, or, if they do, they must often have been displeased at the prospect of the view at the base of these Crags where the ground falls in a straight slope down to the Queen's (or King's?) Drive. How much prettier would the aspect be were these slopes decently clothed in the first instance with Furze (Whins). A few hundred pounds placed at the disposal of Mr. McHattie, the Edinburgh City gardener, with instructions to furnish with Furze the braes we mention, would be a wise start, and ought to have full success. Such growth would in a measure save the ground from crumbling and slipping away. In later years a selection of mountain Pines might possibly be planted. Successfully performed, the whole scene towards this, the east side of the city, would be entirely and agreeably altered. Much more ought to be done to enliven and brighten the road between Duddingston and Holyrood, round by St. Leonards, by planting suitable hardy shrubs.—D.

Died.—Mr. Edmund Tonks, lately of Packwood Grange, Knowle, Birmingham.

Excerpta.—The canning of Pears and Peaches is "booming" in San Francisco at the present time. "There is more danger to the canneries from a supply of cans than anything else," says the "Fruit World."

Prolific Cucumber Plant.—Mr. Greenfield of West Grinstead has, this season, grown a Cucumber plant from which he has cut 114 well-developed Cucumbers. There are still twenty more Cucumbers waiting to be cut. This is stated to be a record for one plant.

A Present of Peaches.—The following kind letter came with a delightful boxful of Peaches from Mr. G. Carpenter, The Gardens, West Hall, Byfleet, Surrey:—"The sender wishes the Editor to enjoy the enclosed Peaches, gathered from the open wall." The fruits were a credit to the sender, and proved that the trees must receive unwonted good culture.

Sussex Weather.—The total rainfall for August at Abbots Leigh, Haywards Heath, was 1.81 inch, being 0.60 inch below the average. The heaviest fall was 0.71 inch on the 27th. Rain fell on ten days. The maximum temperature was 81° on the 19th; the minimum 45° on the 17th, 27th, and 28th. Mean maximum, 73.17°; mean minimum, 51.03° mean temperature, 62.10°, which is 0.58° above the average of thirteen years. Another dry month. There was a sudden fall in the temperature on the 26th, and we had a good rain on the night of the 27th, which has helped green crops a little.—R. I.

The Mission of Flowers.—"I adore flowers," says some lady contemplating a bouquet of Orchids or prize *Carysanthemums* that others have raised at her expense. But she never watched the wonder of their growth; she never saw the shoot start to life; or the pseudo-bulb form; or day by day the flower spike mature. All that such a one cares for is the blaze of colour when it comes, if even she really cares for this. With those who love the flowers, who, whatever their opportunities, are gardeners born, it is otherwise. The poor woman, for example, worn out with want and childbearing, a dweller, perhaps, in the grimy slum of some vast city, who nurtures on the window sill of her one room a Cactus or a Rose cutting. When the Cactus opens its gorgeous dazzling cup, white as the robes of saints or red as the sunset, what does she not see in it? A flower—yes, and more than a flower. Or when at length the Rose sheds its fragrance on the squalid chamber, what memories may not its sweetness recall of childhood, of purity, of hopes buried in the midden heap of life, as life has been for her, poor soul? And what visions of another life as it may be, even for her? We wreath our dead with flowers; they are the best we have to offer them. To our imagining, the heaven we hope for is a land of flowers. Gethsemane was a garden, and to each human item as he wanders through his own Gethsemane such flowers as blow in it have a message. If any doubt it, let them visit a children's hospital, and see how the sufferers there turn their pale faces to the flowers as the flowers turn their faces to the sun. I remember writing, I know not where, that even in a flower there dwells a shadow of the glory of its Maker. This I believe, and so I say, "Good luck to those who call such shadows to the earth; good luck to the gardener; and good luck to his gardening."—RIDER HAGGARD.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
August.										
Sunday .. 25	E.S.E.	deg. 63·6	deg. 61·2	deg. 82·5	deg. 49·9	Ins. 0·31	deg. 63·0	deg. 62·3	deg. 60·2	deg. 42·0
Monday .. 26	W.S.W.	58·1	51·9	60·9	55·0	0·14	64·5	62·5	60·2	52·5
Tuesday 27	W.S.W.	55·9	50·1	63·6	47·5	0·42	60·3	62·2	60·1	41·0
Wed'sday 28	W.N.W.	50·4	49·5	64·9	45·3	—	59·5	61·4	60·1	40·5
Thursday 29	W.N.W.	56·9	50·3	66·1	49·2	—	58·9	60·8	59·9	41·0
Friday .. 30	W.S.W.	61·1	51·8	67·9	56·8	—	61·0	60·8	59·9	49·5
Saturday 31	W.S.W.	63·1	59·0	66·7	55·2	0·35	61·7	60·9	59·7	49·5
MEANS ..		59·2	53·4	67·5	51·3	Total 1·22	61·3	61·6	60·0	45·1

The first part of the week was wet and stormy, the latter part fine but dull, with cool wind, and a heavy rain on the 31st.



Carnation Mrs. T. W. Lawson.

Has this greatly talked of variety been over-propagated, or in our hurry to get blooms have we forced the plants unduly, and so weakened their prospects as to make us think that "our American consins" were a long way behind us in their knowledge of what constituted a good flower, and that the thirty thousand dollars paid for it was a mere waste of money? I have written on flowers that I saw in various parts of the country, and my practical knowledge always led me to think that I had not met with it in perfection, judging from the weak appearance of the plants, and in this I found my surmising quite correct.

Visiting Knowsley Hall recently, where special houses are kept separately for pot Carnations, and only the cream of varieties are grown, my attention was at once arrested by several plants of this variety so superior to other blooms that I had seen that I was obliged to ask the name. Instead of the rather washy rose coloured flowers that I had previously seen, and somewhat spindly stems, the flowers were large, of the deepest rose colour, free from splitting, and the longest and stoutest stems of anything I had hitherto seen. Mr. Doe, the gardener, informed me that it was the first time he had got it good, and had felt at times constrained to throw it away. Not so now, but a greater stock in future, more especially as Lady Derby had even written to ask the name of the lovely variety with the long stems. I believe that, well grown and not hurried, Mrs. T. W. Lawson will hold its position for years. The colour, however, is so beautiful that strong sunshine should be avoided.—R. P. R.

Vagaries of Variegation.

Some three or four years ago an interesting article on variegation appeared in "our Journal," from Mr. Paul, I think, which was allowed to pass without a single comment. Again in the Journal of July 18th, 1901, "K., Dublin," has another very interesting article on the same subject. I regret to see it has also been ignored. There, however, must be a great number of cultivators who are very much interested in the practical part of producing the highest development of which they are capable. There are also some of us interested in the why and wherefore of the unknown cause of such variegation, and welcome any information which leads up to that knowledge.

But what is variegation? I think it is generally conceded to be the absence of chlorophyll from the green parental form. If that is so, it should be the aim of cultivators to develop the variegation, and to eliminate a good part of the parental green, so as to have the two well-defined proportions. How? Well, there are certain conditions by which experience teaches that various conditions are necessary to bring about the best results—shade is essential for some plants, air and strong sunlight in others; or, again, poor soil and not much of it, for others. A few instances may suffice. I have two *Farfugium grandes* growing in a greenhouse; the variegated spots are well defined, but when the plants are put outdoors the leaves become dark green, the spots nearly gone. A golden-leaved *Tradescantia* grown in good light near the glass is good; grown in the shade it loses its variegation. *Nepeta Glechoma variegata* is well defined in a greenhouse, but planted outdoors it becomes dull and indistinct. Need I mention variegated Ivy, which is well known to lose its variegation if planted in rich soil?

"K., Dublin," wisely remarks that variegation, as commonly understood, differs from the normal green type, and plenty of instances are to be found in various classes of plants; in farm crops variegated Carrots, Cabbages, Mangolds, Turnips, &c. I have before me four fresh variegated leaves of a Turnip, two leaves a good white with normal green, the other two, creamy yellow with olive green, all from the same plant and perfectly healthy, but how to explain the why and wherefore I know not. Amongst wild plants I have found and cultivated variegated White Clover, Dock, Ribgrass, and White Nettle. The latter I have grown for six years for experiment, and find a good variegation can be kept by pinching out the green shoots; raised from seeds a fair proportion come variegated.

The number of cultivated variegated plants are simply legion, but what differences they exhibit! Some of them have poor, ill-defined variegation, whilst others are simply beautiful. The latter are generally those with well defined green in the centre, and with good variegation on either side, or with green on either side and the variegation in the centre. There are also some very pleasing forms in the spotted and veined class of plants. These, I take it, "K." would put in the fixed and unalterable variegated class of plants?—S.

Cinerarias and White Wireworms.

In a reply, on page 188, to a correspondent who wishes to know what has attacked the roots of his Cinerarias, I would ask, Is it not possible that this may be an attack of eelworms, which are white, but certainly unlike wireworms, as mentioned by your querist? My experience is that the Cineraria, like the Malmaison Carnation, in some soils is liable to be attacked with eelworm unless the soil is charred previous to use for potting. My ideas are that soil from worn-out pastures and parks that have never been under any proper cultivation, merely common lands enclosed, where the grass is tusssocky and coarse, are infested, or liable to be infested, with eelworm. Such soils are best avoided for all plants, but if used should be slaked for at least six or nine months, keeping all the grass out so as to destroy the roots and starve out the eelworms, and to char the soil previous to using it. If an iron plate is heated, the turf may be thrown on, and turned over so as to get well heated through, which will effectually destroy the pests.—F. STREET.

Notes on the Glasgow Show.

Results show that the executive committee omitted two measures that could not have failed to add greatly to the comfort and pleasure of visitors; the one, the lighting of the tents after 7.30, when it became too dark to see anything in the dusk; the other, a small charge for admission might well have been made, and this would have gone far to obviate the truly awful crush that commenced as soon as people became aware of the attractions that were awaiting their inspection free of all charge beyond the usual admission to the International Exhibition. A gentleman with whom I travelled from Glasgow informed me he had made a journey of sixty miles, and was returning without having been able to get more than a general view of the exhibits, nothing like it having occurred in his experience of a nature quite so pronounced since the International Fruit Show held in the Music Hall, Edinburgh, a quarter of a century ago, when we had to move round in a continuous stream without stopping to note anything on the way.

I am able now to send the name of the exhibitor who secured the first prize for six bouquets and six baskets of cut flowers—Messrs. Malcolm Campbell, Ltd., florists, Gordon Street, Glasgow, and to whom all praise is due for the exhibit as a whole, but for the bouquets in particular; the baskets in the second prize lot, from Messrs. Jones and Sons, Shrewsbury, being, perhaps, the best in the whole of the exhibits in this class. After dispatch of wire on Wednesday, special awards were made to the group of stove plants and Orchids from Messrs. Hugh Low & Co., Clapton, and to the composition of stove and greenhouse plants exhibited by Messrs. J. Veitch & Sons, Ltd., Chelsea. To Mr. Russell, Redlands, Kelvinside, a first-class certificate was awarded for a plant of *Lycopodium scariosa*, which originated on the stem of a Tree Fern eighteen years after its importation from New Zealand.

Of the few classes omitted in the report in last issue mention may be made of the fine examples of Crotons (four) with which Mr. Gault secured first prize, and the extra fine plants, six in number, of double Begonias staged by Messrs. T. S. Ware, Ltd., Feltham, and to which first prize was awarded. Note should also be made of the class for twenty-four large flowering Asters, in which Mr. Stewart, Lilybank, Stewarton, was first, and of the grand lot of Pentstemons, in twenty-four varieties, the winner here being Mr. J. Rowatt, Glassford, with Mr. Stewart a good second. One could not but feel surprised that these brilliant flowers of autumn had been entirely overlooked by the exhibitors of hardy border flowers. Another surprise that was generally felt was the obvious decadence of the culture of plants in pots. Their day is clearly over for the present, at least in Scotland; small plants in small pots being the only class of material required and provided. It is, however, a pity that as far as flower shows are concerned, there seem to be few or none in the north to supply a gap so much felt.—B.

Rhus cotinus.

FREQUENTLY during the last few weeks we have had specimens of the Smoke Sumach sent us to be named. We give here an illustration of a bush of this peculiar, yet very ornamental hardy shrub, with the hope that gardeners not possessing this member in their shrub collections may be induced to plant one or two specimens during the coming autumn. The shrub favours a sheltered nook with its roots in good loamy soil. The foliage is smooth and of a beautiful deep green colour. The inflorescence is the feature of chief attraction and decorativeness however, and at this season, when they have assumed that reddish-dunky shade peculiar to them, there is indeed a very real likeness to an overhanging mantle of smoke, from which resemblance the shrub has been colloquially named the Smoke Sumach. The subject of our illustration was photographed in the gardens of T. W. Webley, Esq., The Uplands, Selly Hill, near Birmingham, but our portrayal scarcely does the tree justice. The inflorescences are so light and feathery that frequently they are used in the lighter class of hand bouquets. The autumnal foliage assumes a rosy-crimson hue.

Societies.

Bath Floral Fête, August 28th and 29th.

THE proverbially stormy days which so often damp the ardour of the committee, citizens, and visitors to the Bath autumn shows fortunately on this occasion cannot be regarded as a truth, notwithstanding that the steady downpour of the previous evening portrayed the usual ill fortune. However, the damp state of the ground militated against an average attendance on the first day, but on the second there would appear to have been some amends made, and it is hoped the receipts at the close were on the right side. The show has a large and influential support from the Mayor downwards, and in the secretaries, Messrs. Pearson and Jeffery, and their chairman, R. B. Cater, Esq., everything connected with the management is conducted on thorough businesslike grounds, and by everyone the highest praise is only accorded. The Sydney Gardens, it has been said, is one of the best show grounds in England from a visitor's point of view, because of the beautifully shaded retreats and walks they afford for promenade. Music and other entertainments of necessity is most select, of the best, and liberally provided, and the only condition necessary to gain a full appreciation and a large attendance is fine weather.

The show itself, and extent of competition, equals that of former times, and in some respects surpasses itself in quality and extent. There was a slight falling off in the entries of the specimen plants, but with Messrs. Cypher and Tucker and others in healthy rivalry this diminution was scarcely perceptible.

Plants.

For eighteen ornamental and flowering plants Mr. J. Cypher took up his usual position with his fine, beautifully coloured Crotons, towering Palms, and well-flowered Allamandas, Bougainvilleas, Heaths, &c.; Messrs. J. B. Woods and Son, Chipping Sodbury, taking second, and Mr. G. Hallett, Bath, third prizes, with much smaller material. Messrs.

Hallett and W. N. Lawes won the prizes for eight foliage plants. With six stove or greenhouse plants in bloom Mr. Cypher was followed very closely by Mr. Geo. Tucker; Mr. Tucker had good Stephanotis, Dipladenia Brearleyana, Bougainvillea, and Clerodendron Balfouri in his collection. Mr. Cypher completely out-distanced his competitors, Messrs. R. B. Cater and Major Doherty, in the group arranged for effect on a space not exceeding 200 feet, with a very fine arrangement and good material. Behind was a wide rustic arch, supporting freely grown and graceful Bamboos, Cocos Weddelliana, and other plants, while from an irregular outlined groundwork sprang tall, brightly coloured Crotons and other choice plants in beautiful relief. Orchid sprays did not form so prominent a place as usual in Mr. Cypher's groups, but the style and quality of plant afforded a complete study for the many visitors interested. The newer Begonia Caledonia, with B. Gloire de Lorraine, formed miniature mounds on the outer points of the front, and were freely commented on. Mr. George

Tucker staged a perfect *Lapageria alba* for the first prize for a specimen plant, Mr. Tucker being his most successful accompanist. The last-named won with twelve Ferns with good varieties well grown, and also with six trained Zonal Pelargoniums. Begonias, Petunias, Coleus, and Gloxinias were not up to the usual standard of the Bath shows in quality of flower or plant.

Cut Flowers.

Cut flowers were extensively shown, and a very bright and varied exhibition was the outcome. Mr. J. Mattock, Oxford, was the only exhibitor of thirty-six spikes of *Gladiolus*, Messrs. G. Humphries, W. T. Mattock, and E. Jefferies winning with twelve spikes, all being extra fine and fresh. With twenty-four varieties of Show Dahlias, Messrs. Lindsay, Cray & Sons, and G. Humphries took the prizes with even stands of up-to-date kinds, Mr. Hoskins, Bristol, winning with twelve and also with nine Fancy varieties. Cactus varieties made a bold display, as also did the Pompons. Messrs. Cray and Sons took up their usual position with the best in both classes, Messrs. W. Treseder, Cardiff, and G. Humphries coming next in point of merit.

ROSES, in twenty-four varieties, found Messrs. Perkins & Sons, J. Mattock, and A. A. Walters in possession, Mr. W. T. Mattock winning with twelve. Mr. J. Mattock came to the front with twelve Tea or Noisette, and also with twelve varieties shown in vases, five trusses of each; his flowers were unusually fresh and bright. Messrs. A. A. Walters and Cooling & Sons completed what proved a very pretty class. Asters were numerous and good, but scarcely so fine as we have seen them, but herbaceous flowers and annuals were exceedingly fine, and the entries numerous. Messrs. Cooling, Walters, and Stokes were the winners of the former, and with annuals Messrs. G. Gerrish, A. H. Newman, and Mrs. Blackburn took the prizes. Double Zinnias were good, Mr. G. Hood having a particularly nice stand of twelve blooms.

No less than eleven entrants faced the judges with a decorated table 6 feet by 4 feet, and though each differed more or less widely in the choice of flower, colour, and style of arrangement, the whole by their contrasting

effect made up a distinctly unique exhibition. Mr. Wilkins, gardener to Lady Theodore Guest, was placed first with an arrangement of Orchid blossoms, which, however, was criticised somewhat freely by reason of the undue use of wire stems. Mr. W. H. Coles, Bath, won with hand bouquet, and Mr. R. B. Cater with a single vase arranged with one kind of flower. This made up an interesting class.

Fruit.

Fruit proved a great attraction to the crowd of visitors, the quality of which has seldom been excelled in quality or quantity. With a collection of eight dishes Mr. Mitchell, gardener to J. V. Fleming, Esq., was first with medium sized bunches of Gros Maroc and Muscat Grapes, a fine dish of Sea Eagle Peaches, Pineapple Nectarines, Brunswick Figs, Sutton's Scarlet Melon, Pears, and Plums. Mr. Wilkins, gardener to Lady Theodore Guest, was second with good Muscat and Gros Maroc Grapes, somewhat ruffled, a large Melon, Figs, Pears, and Nectarines.



RHUS COTINUS.

Mr. Herbert Jones, Bath, third. Eight bunches in four varieties brought three sound collections of Grapes, Mr. Taylor, gardener to Alderman Chaffin, Bath, staging beautifully finished large-berried clusters of Gros Maroc, Madresfield Court, Black Hamburg, and Muscat of Alexandria. This was a superb exhibit, and won much admiration. Mr. Mitchell was placed second with some fine Gros Maroc and Black Hamburg. Third, Mr. A. Taylor, gardener to A. R. Baily, Esq., Frome. Mr. Mitchell staged three large bunches of jet black Hamburgs for the first prize in that class, and Mr. W. Taylor equally fine Madresfield, large in berry, and beautifully finished in a class for any other black. Mr. W. Marsh and Mr. Mitchell were second and third respectively. The last named won with Muscats, and Alderman Howell Davis, Bristol, with brightly coloured Buckland Sweetwater in a class for any other white variety.

APPLES, both dessert and culinary, were extremely numerous and of great excellence, colour and size of fruit being all that could be wished or expected. Pears, too, call for the same remark; Melons in green and scarlet flesh, Peaches, Nectarines, Plums, Cherries, Figs, and Filberts, all showed the fulness of the season, numerous dishes being put up in each class.

Vegetables.

Lady Theodore Guest took up her usual position at Bath with a collection of twelve varieties of vegetables of prime quality, Onions being especially fine, Celery, Tomatoes, Cauliflowers, &c., bearing the hall mark of excellence. Mr. Wilkins also won Messrs. Webb's prize for a collection of six varieties; Mr. W. D. Porter and Mr. A. F. Somerville being also successful. Mr. Wilkins won with red Tomatoes, and Messrs. Cray & Sons yellow. Cottagers made a grand display of all kinds, and the competition in every instance most keen.

Honorary exhibits were contributed by Messrs. Veitch & Son, Exeter, cut flowers and rock plants; Messrs. House & Son, hardy flowers, Delphiniums, Pentstemons, and Phloxes; Messrs. B. R. Davis, Yeovil, Begonias; Messrs. J. Garaway, Clifton, Dahlias.

Brighton and Sussex Horticultural, August 28th and 29th.

This annual function passed by in a most successful fashion on Tuesday and Wednesday, a week ago, in the Dome, Corn Exchange. Brighton and Sussex gardeners have heart and soul in their flower show, else many years ago the word "defunctus" would have been written upon the pages of its records.

The great and rich of Brighton do not respond very liberally toward supplying grist for the mill, and what success and influence obtains is chiefly to be credited to the working gardeners themselves. It is for them to exercise their solicitations with great zeal, and maybe, after their years of quiet working, the crowd will come in and push along the "waggon" that required their assistance more in days agone.

This last (or rather latest, not last) show was up to the standard of some past years, though we won't say all years of the past. Cut flowers were somewhat sparingly exhibited. The Roses would have been better left on the bushes, so poor were they, but Asters, Dahlias, and Zinnias were all fine. Groups came from the usual competitors, and again Mr. G. Miles carried off the Corporation Challenge Cup and first prize for the most effectively arranged group of flowering and foliage plants. Mr. James Adams was placed first for the group of exotic Ferns, and Mr. G. Miles fell second. Nurserymen are always largely in evidence in open-class competitions at Brighton, and for the table of flowering and foliage plants we find Mr. T. Head leading the way. Mr. J. Warren showed his skill by lifting many of the leading prizes in classes for stove subjects, while Messrs. W. E. Anderson, J. Goble, G. Walder, H. Head, G. Sims were the chief prizewinners for such as Begonias, Fuchsias, Zonal Pelargoniums, Gloxinias, and Coleus. For twelve table plants Mr. T. Osman from Chertsey beat Mr. G. H. Sage, Bayham Abbey, Lamberhurst.

The competitions in the decorative cut flower section formed one of the principal features of the exhibition. Fruit classes, too, were heartily contested, and some splendid bunches of Grapes were shown. Amongst non-competitive exhibits, that from Messrs. J. Cheal & Sons, Crawley, was the finest and most extensive. Mr. H. Harris and Mr. G. W. Piper sustained the Rose classes, while for twelve Gladioli in six varieties we found Mr. H. J. Stenning the triumphant entrant. Mr. W. Peters beat Messrs. Cheal for Show and Fancy Dahlias, and the latter came again second to Messrs. J. Stredwick & Sons for a dozen bunches of Pompons. This order was reversed for the same amount of Cactus and decorative Dahlias.

We were pleased to observe Mr. G. H. Sage's success in capturing 30s. and the society's bronze medal for a collection of hardy perennials and bulbous flowers, in eighteen distinct kinds. Mr. J. Davis followed next; and third, Mr. W. E. Anderson. Mr. J. Davis won for twelve kinds of annuals in bunches. Mr. W. L. Bastin cantered in and won the silver medal for a collection of nine kinds of vegetables. These latter were very good, as were the vegetable displays all through. Mr. Charles H. Jones, gardener at Ote Hall, and our old friend Mr. Wm. Taylor, besides Mr. T. Osman, renowned as a fruit grower no less than as a plantsman, did well in the Grape classes. Mr. W. Cheater, gardener at Shrove Hall, also was "in the running."

At the luncheon held on the first day of the show, various speeches were given by the judges, and it was pleasant to hear Mr. Thorpe

recognised in such terms of high praise. He was declared to be the "best hon. secretary the society had ever had." The good work and exertions of the committee were not forgotten.—S.

Royal Horticultural—Scientific Committee, August 27th.

Present: Dr. M. C. Cooke (in the chair); Messrs. Chapman, Drury, Odell, Honston, Worsley, Bowles, Saunders, Rev. W. Wilks, Drs. Rendell and Masters.

Apricot splitting.—Dr. Cooke reported on the Apricot, the pulp of which was found to be split, and a foreign substance growing upon it. This, however, was nothing but the common blue mould which grows on decaying matter. Mr. Worsley assigned various causes for the splitting of the fruit.

Silver leaf.—Dr. Cooke stated that it was doubtful if there was any essential relation between gumming and the so-called Silver-leaf disease of the Prunneal. Dr. Cooke doubted whether the fungus called *Coryneum Beijerinckii* had any casual connection with gumming. On the other hand, gumming in *Prunus japonica* had been traced to *Cladosporium epiphyllum*.

Miscellaneous Notes.—Dr. Cooke stated that he had been unable to find any fungus on the Crocus corms submitted by Mr. Bowles, nor on the Violet leaves sent from Ireland; the frosted spots were due to the precipitation of the salts from the solution with which the leaves had been sprayed) see "Gardeners' Chronicle," August 24th, page 160, col. c, where the appearances are attributed to a fungus, *Phyllosticta violae*).

Gooseberry shoots.—Some shoots which were shrivelled and dead were exhibited, the assigned cause being the presence of red spider.

A new case of apospory.—Mr. Drury exhibited cultures showing developed masses of prothalli on the soral sites of *Athyrium filix-fœmina* var. *cristatum fimbriatum*, raised by Mr. Garnett of Bowness, Windermere. A frond of this Fern was exhibited at the recent meeting of the British Pteridological Society, and Mr. Drury remarked at once its great likeness in make to *A. f. f. clarissimum*, Jones, though it differed from that Fern in bearing long, slender, much divided tassels at all tips, rendering it a very beautiful form. On examining the sori they exhibited so strongly the white, woolly character indicative of apospory, that permission was asked and obtained to put some material under culture, the immediate result of which was an extension of the sporangial growth, demonstrating that, once again, abnormally slender, linear pinnules are correlated with apospory. There are some indications also of apical apospory, but not yet definite enough to be determined with certainty. Soral apospory is, however, beyond a doubt. This represents the fourth instance of apospory in *Athyrium filix-fœmina*. Mr. Drury also exhibited a culture showing apical apospory in *Lastrea pseudo-mas* apospora, already recorded; well developed prothalli springing from all the fimbriate tips of the crests of the pinnæ.

Gouty swellings on a species of Silver Fir.—A specimen was shown of the swellings produced by a Coccus-like insect. Petroleum emulsion was recommended as a palliative, and destruction by fire of the affected shoots advised.

Medicinal Plants in the vicinity of old ruins.—Mr. Honston asked for information as to any paper dealing with the presence of herbs around mediæval ruins. The presence of *Aristolochia clematitis* around the ruins at Godstow, Oxford, was cited as one illustration.

Poisonous Plants.—Mr. Bowles alluded to the poisonous effects produced by contact with the so-called *Ampelopsis Hoggi*, which turned out to be really *Rhus toxicodendron*.

Dr. Masters alluded to many similar cases, all traceable to the distribution from a particular nursery of *Rhus toxicodendron* instead of *Ampelopsis*. A conversation arose in connection with this subject, Mr. Drury stating that honey in any form produced uncomfortable symptoms with him; and Dr. Cooke alluded to other cases in which Mushrooms produced evil effects upon some persons and not upon others who partook of the fungi at the same time.

Mushrooms in coal cellar.—A Fellow of the Society, present as a visitor, exhibited fine specimens of *Agaricus campestris* var. *villations* which was growing abundantly on the walls of his coal cellar. Salting the walls was recommended as a remedy.

Chermes fagi.—Specimens of Beech bark were shown in illustration of the abundance of this insect this season. Unfortunately, the attack was so widely spread that anything in the way of cure was impracticable.

Twin Apple.—Mr. Hudson sent a specimen of syncarpy in which two Apples were partly fused together at the base, probably from pressure causing mutual grafting in a young state.

Ornamental Grasses, &c.—Mr. Worsley exhibited specimens of *Pennisetum macrourum* from South Africa, and of *P. Ruppelli* from Abyssinia. Mr. Worsley also exhibited a *Coreopsis*, in which the ordinary ray florets had been replaced by regular tubular ones.

A "Cotyledonous" germination in Crinum.—Mr. Worsley also stated that since his previous communication on this subject, he had found that the seedling plants of *C. yemense* exhibited the same peculiarity.

Two-fold Helianthus.—Dr. Masters exhibited shoots of *Helianthus* Miss Mellish of two forms, one stout, erect, green, and robust in habit; the other slender, deep purple, and greatly resembling the shoots of *Harpalum rigidum*, exhibited for comparison.

Sandy Horticultural, August 29th.

The Sandy Flower Show is unique in its way. It is doubtful if there is another gathering like it in the kingdom. A more comprehensive schedule of prizes can scarcely be imagined. There are twenty-six classes for plants, fifty-three for cut flowers, five for table decorations, thirty for fruit, and eighty-seven for vegetables. In addition there are classes for needlework, stuffed animals, carving, specimens of photography, honey, butter, eggs, trussed fowls, dogs, poultry, pigeons, rabbits, cats, &c., something almost of everything which can interest country people. Sandy is in the centre of an extensive market gardening district. It is but a large village; there are no great centres of population near it, and yet thousands of people come in from all parts to see the show, by road as well as by rail. It is the district holiday, and all are happy if the weather is fine. A crack military band is engaged, and there are other entertainments. The work of organising must be enormous, but everything goes smoothly. A large number of judges have to be engaged. A prolific study of the habits of country people is afforded at a Sandy Flower Show.

There are fine specimen plants from Cypher of Cheltenham. Finch of Coventry and Vause of Leamington compete with twelve specimens in flower, and the prizes went in the order of their names. Local plants were fairly good. Mrs. Axtell, of Sandy, is a leading exhibitor. Mr. T. Lockie, The Gardens, Diddington Hall, had some very fine Cockscombs; a plant he "cultivates." Cut flowers are a leading feature, for there are some keen florists about Sandy. There are classes open to all comers, and they are good enough to attract to Sandy some of the leading growers of the day. Harkness & Sons were there with Roses from Bedale; they were first with forty-eight varieties, and also with eighteen Teas. The following were good in the forty-eight class:—Caroline Testout, Horace Vernet, Maman Cochet and its white variety, La France, Helen Keller, Marie Verdier, Victor Hugo, Mrs. J. Laing, Duke of Teck, Madame J. Cointet, White Lady, Bessie Brown, Maréchal Niel, and Ernest Meiz. The Brothers Burch, of Peterborough, were second, also with some good blooms. The best Teas from Bedale were Maman Cochet, Niphotos, Maréchal Niel, White Maman Cochet, Bridesmaid, Madame de Watteville, Etoile de Lyon, &c. Messrs. G. & W. Burch were again second. The best twenty-four Roses in the amateurs' division came from Mr. W. Kingston, Bedford. Gladioli, in collections of eighteen spikes, were very fine, Messrs. Harkness & Sons being in fine form; and Mr. C. Bright, Cambridge, was a very good second.

The Dahlia classes attract some of the leading southern growers, and so good quality reigns. Mr. Geo. Humphries, nurseryman, Chippenham, was first with thirty-six Show and Fancy varieties; there were well-finished blooms of Rebecca, Shotesham Hero, R. T. Rawlings, Shirley Hibberd, Ethel Britton, Mrs. Gladstone, Prince of Denmark, Muriel Hobbs, Thos. Pendered, Dorothy, Geo. Hobbs, Victor, &c. Messrs. Keynes, Williams & Co., Salisbury, were second. With twenty-four varieties Mr. J. R. Tranter, Henley-on-Thames, was first; he had good blooms of R. T. Rawlings, Diadem, Mrs. Gladstone, Victor, John Walker, &c. Mr. Geo. Humphries was second. Cactus Dahlias were a fine feature; with twenty-four varieties shown on boards Messrs. Keynes & Co. were placed first with excellent blooms of Rosine, Ajax, Green's White, Mrs. J. J. Crowe, Lyric, Magnificent, Elsie, J. W. Wilkinson, The Clown, J. T. Hudson, W. Jowett, &c. Mr. Geo. Humphries was second; he had in good character Island Queen, William Treseder, Lucius, Innovation, J. F. Hudson, &c. Cactus Dahlias shown in twelve bunches of blooms made a very fine display. Messrs. Keynes & Co. were first with Columbine, new, white and scarlet; Cornucopia, Mrs. Carter Page, J. W. Wilkinson, Prince of Yellows, Lord Roberts, Centurion, &c. They were the only exhibitors. With twelve bunches of Pompon Dahlias Messrs. Keynes & Co. were first; they had in good character Little Jack, Nellie Bromhead, Tommy Keith, Sunny Daybreak, Lilian, Douglas, Darkest of All, &c. Mr. C. Bright was second.

Hardy herbaceous and bulbous flowers, in twenty-four bunches, were a very fine feature, the bunches large and very striking. Messrs. Harkness & Sons were first with Montbretias in variety, Gaillardias, Phloxes, Galtonia candicans, Lilies, Gladioli, &c. Second, Messrs. A. W. Young & Co., Stevenage. In the gardeners' and amateurs' division, subjects such as Dahlias, Gladioli, Asters, Marigolds, Phloxes, Zinnias, &c., were numerous and good. The best twelve bunches of stove and greenhouse cut flowers came from Mr. T. Lockie, who had some old-fashioned subjects of an interesting character, and twelve bunches of hardy herbaceous and bulbous subjects made a good class.

Fruit was a good feature. The best collection of eight distinct kinds came from Mr. J. Barson, The Gardens, Hinchbrook, Huntingdon, who was placed first with Gros Maroc and Muscat of Alexandria Grapes, Sea Eagle Peaches, Pineapple Nectarine, Moor Park Apricot, &c. Mr. H. Folkes, Hemel Hempstead, was second. With six kinds of fruit Mr. Carlile, gardener to E. H. Gribble, Esq., Henlow Grange, was first; he had Foster's Seedling and Black Hamburg Grapes, Dymond Peaches, &c.; Mr. A. Lockie was second. Mr. Carlile had the best six dishes of Apples, staging excellent fruits of Peasgood's Nonesuch, Warner's King, and Emperor Alexander, Irish Peach, Lady Sudeley, and Beauty of Bath; Mr. Barson was second. Mr. Carlile had the best two bunches of Black Hamburg Grapes. With any other black Mr. Barson came first with Madresfield Court, and he was also first with two bunches of White Muscat of Alexandria. With two bunches of any

other white Mr. Folkes came first with Golden Queen. Peaches, Nectarines, Melons, Plums, &c., were numerous shown, but time did not permit of notes being taken.

Vegetables were very numerous, as they came from gardeners, market gardeners, and cottagers. Messrs. Sutton & Sons, Reading, Messrs. Webb & Sons, Wordsley, and Messrs. Jas. Carter & Co., offered special prizes for six kinds of vegetables, all to have been grown from seeds supplied by the firm. Mr. Lockie, who was in great form, won the first prizes in all three cases. It was said the display of vegetables was one of the best ever seen in Sandy.

There were some pretty table decorations. Miss V. Maddison, St. Neots, was first with a furnished table; and Miss A. Gregson, Old Woodley, was second. Bouquets, &c., were also shown. Messrs. Laxton Bros., Bedford, had a colossal floral lyre resting upon a cushion of blossoms. This proved a very attractive feature.

Wellingboro' and Midland Counties Dahlia, August 29th.

The annual exhibition of this society, which is doing so much to extend the culture of the Dahlia in the southern Midland counties, was held on the above date in the charming grounds of Redwell, the residence of Thomas Pendered, Esq., the president of the society, the whole of the private grounds and gardens being thrown open to the public. The day being very fine there was a large attendance; the tent and grounds were lit up, and after the show was closed at 8 p.m. there was dancing on the lawn tennis ground until a late hour. The president's garden was seen to the best advantage, and the fine development of his small but select and choice collection of coniferous trees, was much admired. As is usual, some of the leading southern growers competed, and a large number of the amateurs and working men of Wellingborough also exhibited.

Fourteen out of the forty-five classes found in the schedule of prizes were open to all comers. The leading class was for thirty-six blooms of Show and Fancy Dahlias, distinct; the first prize was taken by Mr. John Walker, nurseryman, Thame, whose leading blooms were Chieftain, R. T. Rawlings, J. T. West, W. Keith, Jas. Cocker, Arthur Rawlings, Frank Pearce, Victor, Plutarch, Mrs. Every, Colonist, Shirley Hibberd, Harrison Weir, Mrs. Gladstone, Geo. Rawlings, Matthew Campbell, Professor Fawcett, John Standish, &c. Mr. M. V. Seale, nurseryman, Sevenoaks, was a close second, and, like Mr. Walker, he had very good flowers, the season considered. Chief among them were Duke of Fife, Maud Fellowes, R. T. Rawlings, Diadem, Mrs. Gladstone, Goldfinch, Wm. Powell, John Rawlings, John Walker, Alice Emily, Virginal, Prince of Denmark, John Forbes, &c. Messrs. Keynes, Williams & Co., Salisbury, were third. With twenty-four cut blooms Mr. Seale was placed first; he had in good character Virginal, John Forbes, Duchess of York, J. T. West, Mrs. Gladstone, Watchman, Duke of Fife, John Walker, John Rawlings, Prince of Denmark, Alice Emily, S. Mortimer, &c. Mr. G. Humphries, nurseryman, Chippenham, had well developed blooms of Harrison Weir, John Walker, Arthur Rawlings, R. T. Rawlings, Wm. Powell, Colonist, Emin Pasha, &c.; third, Mr. John Walker. With twelve blooms Mr. Geo. Humphries was first; his leading flowers were Mrs. J. Downie, Mrs. Every, James Cocker, Heracles, Ethel Britton, R. T. Rawlings, &c. Mr. Seale came second with Duchess of York, Sailor Prince, John Walker, Mrs. J. Downie, Mrs. Gladstone, &c.; third, Mr. John Walker. It will thus be seen that the honours in the three foregoing classes were fairly distributed among the leading southern growers.

Cactus Dahlias shown on boards were an excellent feature, as there were four collections of eighteen blooms, and Mr. John Walker was awarded the first prize, having excellent blooms of J. W. Wilkinson, Loyalty, Britannia, Minnie Walker, pale yellow tipped with white; Mrs. J. J. Crowe, Innovation, Mrs. Carter Page, Lord Roberts, Magnificent, Canary (new), delicate canary yellow; Lyric, &c.; second, Mr. Seale, who ran Mr. Walker close with well developed examples of Mayor Weston, The Clown, Magnificent, Zephyr, Mrs. J. J. Crowe, Ajax, Britannia, Starfish, Charles Woodbridge, &c.; third, Mr. W. Baxter, florist, Woking. With twelve blooms Mr. Walker was again first, having fine blooms of J. W. Wilkinson, Sylph, Lyric, Lucius, Mrs. J. J. Crowe, Britannia, Vesta, Magnificent, Imperator, &c.; Mr. Seale was second, his leading blooms were Sandpiper, Mary Service, Charles Woodbridge, Zephyr, Debonnair, &c.; Mr. W. Baxter was third.

There were four collections of twelve varieties of Cactus, three blooms of each, shown on wire frames. Mr. J. Walker was again first with excellent illustrations of J. W. Wilkinson, which appears to be a constant variety; Canary, Imperial, Britannia, Mrs. C. Page, Lord Roberts, Lyric, Baden Powell, Winnie Walter, Mayor Tuppenny, &c.; Mr. Seale was second, having Vesta, Mrs. J. J. Crowe, Charles Woodbridge, Keynes' White, Mrs. C. Page, Zephyr, Artus, Eclipse, &c.; Mr. G. Humphries was third.

With twelve bunches of Pompon Dahlias, six blooms in a bunch, Mr. Seale was first with capital blooms of Doris, Ernest Harper, Sunny Daybreak, Douglas, Tommy Keith, Lilian, The Duke, Ganymede, Elsie Grafton, &c. Mr. J. Walker was second with Sunny Daybreak, E. Harper, Ganymede, Phoebe, Dr. Jim, &c.; third, Messrs. Keynes, Williams & Co.

Mr. Seale took the first prize for a vase of Dahlias; he employed a tall trumpet glass, and employed Cactus Dahlias with appropriate foliage; it was admirably executed. Mr. J. Walker was awarded the

second prize. Special prizes were offered for the best three blooms of a yellow Show Dahlia, taking the first prize with R. T. Rawlings, Mr. Seale coming second with Mabel Stanton. A special prize offered for the best three blooms of a new seedling Cactus Dahlia was awarded to Mr. J. Walker for Canary.

There were four open classes for fruit, each of which brought a good competition. With three dishes of culinary Apples, Mr. Thomas Pendered, the president, was first with very good examples of Warner's King, Peasgood's Nonesuch, and Ecklinville Seedling; Mr. G. Douglas, Wellingborough, was second with varieties unnamed. With three dishes of dessert Apples, the president was again first, having Cox's Orange Pippin, Worcester Pearmain, and Cox's Pomona; Mr. G. Douglas was second. The latter was first with three dishes of dessert Pears, having good fruit of Clapp's Favourite, Doyenné Boussoch, and Bon Chrétien; Mr. Pendered was second with only just inferior examples of Pitmaston Duchess, Marie Louise, and Louise Bonne of Jersey. With three dishes of Plums Mr. Douglas was first with very fine fruit of Cox's Emperor, Kirke's, and Victoria; Mr. W. Keller, gardener to T. Bower, Esq., Wellingborough, was second with unnamed.

Division B comprised nine classes, open to all comers, amateurs. Mr. A. Robinson, Hill Street, was first with twelve Show Dahlias; Mr. Thos. Pendered, president, was a close second, both with good blooms. Mr. Robinson was also first with six blooms, and Mr. J. York, Desborough, second. The best twelve cut blooms of Cactus came from Mr. H. A. Needs, Horsell, Woking, who had in fine character Mrs. J. J. Crowe, Mrs. Carter Page, J. W. Wilkinson, Ajax, Lyric, Purity, Uncle Tom, W. Treseder, Zephyr, &c.; Mr. J. York was second. With six blooms Mr. Needs was again first, having excellent blooms of Purity, Mrs. J. J. Crowe, Charles Woodbridge, Zephyr, Lucins, and Mary Service; Mr. H. Bindley, Desborough, was second. Mr. Needs was also first with six bunches of Cactus, three blooms in a bunch; he staged good examples of Uncle Tom, Mrs. J. J. Crowe, Mrs. Carter Page, J. F. Hudson, Britannia, and Lord Roberts. A second prize was awarded, but no exhibitor's name was affixed to the stand. Mr. S. Etheridge was awarded the first prize for six bunches of Pompon Dahlias. Mr. J. York had the best bouquet composed of Dahlias. Special prizes were offered by Mr. John Walker for six blooms of Show Dahlia John Walker. Mr. A. Robinson was first and Mr. W. E. Prentice second.

In division C there were twenty-two classes in which the competitors were cottagers, and the competition throughout was very good. There were classes for Dahlias, Asters, and Zinnias, for Apples, Pears, and Plums, and also for various vegetables. There was a marked increase in the entries from amateurs and cottagers this year.

Certificates of merit were awarded to Cactus Dahlia Canary, a charming variety from Mr. John Walker, and to Fancy Dahlia Unique, buff ground, slightly striped and pencilled with crimson and maroon, the reverse of the petals cerise, fine petal and outline; also from Mr. Walker to single Dahlia Robin Adair, crimson purple tipped with white; a pretty and distinct variety from Mr. M. V. Seale; and to Cactus Dahlia Mrs. H. A. Needs, pale wine crimson, excellent Cactus character, from Mr. W. Baxter, Woking. Messrs. H. E. & W. Lack, Wellingborough, had a large collection of plants, hardy fruits, &c., which was highly commended.

Dumfriesshire and Galloway Horticultural, August 30th.

This society, originally instituted in 1812, held a very successful show in the Drill Hall, Dumfries, on 30th of August, the entries numbering over 1000, although a few were not forward on account of the tempestuous character of the weather the previous night and early in the morning of the show. The competitive classes were generally well filled, and the quality good. The cut flowers were good as a rule, but pot plants were not so well represented as they might have been. The Burgh of Dumfries on for the best exhibit of horticultural produce was won by Mr. Houston, gardener to the Crichton Royal Institution, with a well-arranged table of useful produce, superior to that staged two years ago at the last show of the society. Mr. J. M'Kinnon, Terregles Gardens, was first for a table of plants; Mr. James Service, Corberry and Janefield Nurseries, being a good second. For a dinner table with floral decorations Mrs. R. Service was first, and Kerr Bros. second in a remarkably close competition. Dahlias were splendidly shown, Messrs. Dickson & Sons, Newtonards, leading with capital Show and Fancy; while in a stiff competition for Cactus varieties Kerr Bros. carried off first and second. Messrs. Dickson also carried off the first for twenty-four Roses with a fine lot, Messrs. J. Learmont & Sons, Dumfries, making a good first appearance in competition for Roses with smaller but good blooms, which took the second prize. Messrs. Learmont were also first for Sweet Peas. Herbaceous plants were strongly represented, and Messrs. T. Kennedy & Co. were first with a clean bright stand of good flowers. In the gardeners' classes Mr. J. M. Stewart, Mollance, was first for herbaceous plants; and Mr. Scott, Broomrigg, and Mr. Jas. Duff, Threave Gardens, also made a good appearance in the other subjects, in which, by the way, several local amateurs won prizes.

Fruit was very creditable indeed, the judge, Mr. Kirk, Norwood, Alloa, remarking that the Black Hamburgs were almost superior to any he had seen at shows this season. Mr. J. M. Stewart was a leading

winner in several fruit classes, but Messrs. Duff, Gardiner, Henderson, and Murray all scored in this department.

Vegetables were very good and the competition strong. The amateur classes were well filled, and the exhibits mostly of high quality. Special mention is due to the trade exhibits, which were among the best ever seen in Dumfries. Messrs. Dickson & Sons, Newtonards, Palmer and Sons, Annan, and Smith & Sons, Stranraer, and W. Learmont and Sons, Dumfries, all showed Roses. Miscellaneous tables of good effect were also shown by Messrs. Fotheringham & King, Mr. James Kennedy, Messrs. T. Kennedy & Co., and Messrs. W. Middleton & Son, all of Dumfries. Lady Herries opened the show in a graceful speech, and was presented with a bouquet sent by Messrs. A. Dickson & Sons. The services of the new secretary, Mr. R. G. Mann, were worthy of all praise.

Isle of Wight Horticultural.

At the invitation of Mr. and Mrs. J. I. Thornycroft the members of the above association, to the number of forty-two, paid a visit to Steyne House, Bembridge, on Saturday last, August 31st. The party was met at the lodge gates by Mr. T. Collister, the gardener, who welcomed them in the name of Mr. and Mrs. Thornycroft. They were afterwards conducted over the whole of the grounds, which are noted especially for Roses and hardy fruit culture. One house devoted to Peaches showed an excellent crop of very fine fruit. The Chrysanthemums in pots looked very promising. A good batch of the new Jap. Mrs. J. I. Thornycroft looked remarkably sturdy and well. Tea was provided in one of the fine reception rooms at the mansion, the table being beautifully laid out and loaded with good things that go to make up a substantial tea. Mr. T. Collister presided, Dr. Groves, the chairman of the association, being only able to pay a short visit.

After tea Mr. S. Bulby, Brading, in a happy speech, proposed a hearty vote of thanks to Mr. and Mrs. Thornycroft for their invitation and their kindness. Mr. Wm. Couldray, Bembridge, seconded, and Mr. Dennis, joint secretary to the association, supported the resolution. Mr. W. W. Sheath, Ventnor, proposed a vote of thanks to Mr. Collister for his urbanity and kindness in showing them round. Mr. Smith, Newport, seconded, and Mr. Collister responded. Mr. E. Silience and Mr. C. Orchard, Bembridge, also thanked the helpers, and welcomed the association to Bembridge. Mr. and Mrs. Thornycroft came into the room during tea, and they met with a most hearty reception. They expressed themselves gratified at seeing such a goodly number present. —C. ORCHARD.

Scottish Horticultural Association.

A few Saturdays ago, on the invitation of Mr. James Grieve of Red Braes Nursery, Edinburgh, about fifty members of the Scottish Horticultural Association paid a visit to his sunny grounds to inspect the far-famed collection of Violas, of which the said worthy gentleman is very proud. The weather favoured the party, and a happy two hours were spent. The nurseries looked in their midsummer garb, everything in most luxuriant health, in spite of the unusual absence of rain. Only the weeds seemed to be in bad health, and had somehow dwindled into invisibility.

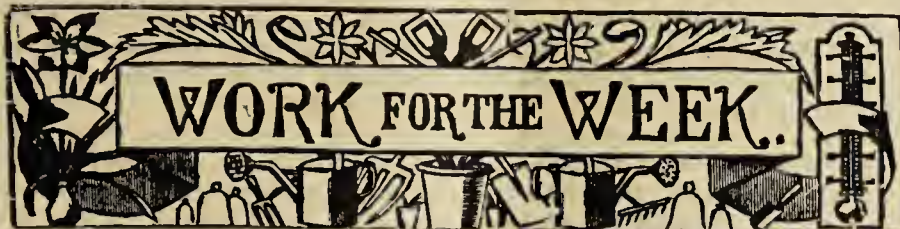
As before said, the Violas were the leading feature, and if anything at this time of day were needed to prove how valuable they are for summer and other kinds of bedding, one had only to see the healthy luxurious foliage and profusion of well-developed bloom, to be convinced that they were quite indispensable for beautifying the gardens, either of the peer or peasant. Their names were legion, and seeing so many together gave the onlooker a good idea of the best, and these best can be summed up in a very few names. Among whites nothing seems almost worth growing but Marchioness, its size, substance, form, purity, and good habit all place it far ahead of any compeers. Among yellows Old Bullion still holds a useful place, but among newer forms Red Braes Yellow, a rayless golden seedling of Mr. Grieve's, seems destined to hold the belt, while W. H. Welsh holds its head so boldly as if he is inclined to throw out a challenge for supremacy.

Of blues there are numerous good sorts. Archie Grant is not easily beaten; Sir Robt. Pullar, also a first-rater of fine dwarf habit; Royal Scots, a darker blue of fine habit and most floriferous, one of the gems; Sulphurea was also very noticeable, as well as many Fancy sorts too numerous to name. Messrs. Grieve's collection of Carnations is also noteworthy, though the general stock were hardly in bloom, but the company were amazed at the large plantation of Duchess of Fife, which is undoubtedly the most useful of all the pink Carnations, just the shade of pink that never jars with any other colour, and, as a bouquet maker present remarked, "when you have no instructions as to colour for a bouquet, use the Duchess, she never gets you laughed at." The stock of the Duchess at Red Braes is most extensive, and during the blooming season the outting crop will be almost like Carnegie's millions, not easily counted.

Autumn and early winter flowering Chrysanthemums were strongly in evidence, all planted out, and making that healthy growth which is the sure precursor of handsome flowers. Many other flowers were receiving the special care that insures success. Mr. Grieve's keen eye and love for "new novelties" is at every corner in evidence. Very noticeable was a bed of a new, or probably an old, but forgotten, yellow Calceolaria, of pale canary shade, fine dwarf habit, and abundant blooming habit.

At the close of the inspection Mr. M. Todd was called upon to

express the thanks of those present to the Messrs. Grieve for the opportunity given them of spending such a pleasant and profitable hour. Mr. Todd, in his happiest vein, conveyed to Mr. Grieve the gratitude of all present for the feast of beauty with which he had fed them, and complimented the firm on the improving and prosperous appearance the grounds everywhere presented, and hoped that their worthy senior, who had been so long a leader in Scottish horticultural life, would be long spared with the enthusiasm of youth and the wisdom of age to render yet further services to horticulture. EDINA.



Hardy Fruit Garden.

Gathering and Storing Fruit.—Varieties of Apples and Pears which are in a mature and ripe condition during the present month will be upon the whole in an advanced condition for gathering and storing in a suitable structure to complete the ripening. Most early Apples may be eaten in good condition direct from the trees, but it is seldom wise to leave them hanging after the ripening process is advanced, for the fruit is liable to fall and become seriously bruised, after which decomposition sets in and the fruits rapidly become useless. Another reason for gathering is that blackbirds peck the fruits and half eat them away. Wasps, too, are very troublesome, attacking the ripest and most luscious specimens. Pears ought not to hang on the trees until ripe, as they invariably become mealy if hanging too long. As soon as the skins begin to turn a yellow colour, these fruits may with advantage be picked and stored in a cool room to finish. Another ready means of ascertaining whether the fruit is in a condition to pick or not is to lift the fruits to a horizontal position, and if they easily detach themselves from the spurs they are of course ready to gather. Twisting or dragging from the spurs is not a proper method of gathering. The best and choicest specimens of both Apples and Pears should be handled carefully when gathering. All fruit should be stored in a clean, sweet, and airy structure, and ought to be laid a single layer deep on clean paper, and covered with another layer of paper to exclude light. Pears ought to be separately stored from Apples, that is, where there are many; a separate compartment is best. Movable and portable fruit trays are excellent for the purpose of storing, and also for making the frequent examinations of the fruit afterwards which are necessary in order to remove the decaying specimens. Where Pears are wanted to be accelerated in ripening, it is best to give them the warmest end of the structure. Some fruits can always be brought on in this way. A few days will often suffice to bring them to a fully ripe condition.

Peaches and Nectarines on Walls.—The midseason varieties of Peaches and Nectarines now advancing to a ripe condition should have protection from birds by hanging nets in front of the trees, also in such manner as to catch any fruits which may fall. Before netting the trees it is desirable to fully expose all fruits to the sun by drawing the leaves on one side, or in some cases cutting away one-half of a leaf. The fruits cannot readily colour where they are shaded. It will also be necessary where the growths have not been laid in to do this, at the same time cutting away all those parts which are superfluous, so far as this can be done, while fruit remains on the trees.

New Strawberry Plantations.—Before fresh quarters of Strawberries can be planted it is necessary to trench and manure the ground. Bastard trenching is the best method of preparation, as by this plan the soil, though deeply moved, is kept in its original position. This method is imperative where the subsoil is bad, and not fit to be brought to the surface. After trenching the ground may be made firm, and strong well-rooted plants inserted as soon as possible. Plants previously inserted for an early crop, and now well established, should have the runners removed which may have started since planting. The soil between the plants ought also to be kept free from weeds by lightly hoeing. Where there is a quantity of well-rooted runners which have emanated from plants that have fruited well this season, and they cannot be planted at once, it is best to lift and plant them in nursery beds until the ground for their permanent reception is prepared for them. A number of small but promising young plants may also be treated in the same way for spring planting.

Outdoor Vines.—Lateral shoots that are likely to become exuberant should be pinched back. A moist condition of the soil about the roots will assist the swelling and ripening of the fruit. Give a good mulching of manure after the watering, which will keep the ground in a uniform state of moisture. Outdoor Grapes fall a prey to mildew if the soil about the roots should long remain dry. Secure the current year's rods or canes in to the wall or fence, as it may be highly essential to dispense with some of the old rods, and train in fresh at the winter pruning.

Morello Cherries.—If it be necessary to preserve fruit on the trees as long as possible, it is requisite to net over the trees where the fruit

is hanging. Trees from which the fruit has been gathered should be overhauled, first cutting out the old bearing shoots, then reduce the number of the current year's growths, retaining the most promising for laying in, and furnishing the trees with bearing wood for the next season. Long shoots of medium strength are the best for bearing. Very strong and sappy wood is not so desirable, though such shoots may be useful for filling up vacancies in bare parts.

Wall Trees after Fruiting.—The majority of wall fruit trees, after the fruit has been gathered, may be divested of much superfluous wood, and receive a good washing with the hose or syringe. This will rid the trees of insects. Red spider is a troublesome pest to many of the stone fruit trees, sucking the juices from the leaves, which, owing to this, cannot properly carry out their functions, hence the buds are weakened, and the fruit-bearing capacity of the trees impaired for another season. The roots must also be well moistened.—LYMINGTON.

Fruit Forcing.

Melons.—Plants in pits and frames will not need further damping overhead, and they should only be given enough water at the roots to keep the foliage from flagging. Apply good linings to the sides of the frames, so as to furnish a warm atmosphere, kept dry by free ventilation, which the fruit requires to finish well. The latest plants in houses are now in flower. Fertilise the blossoms when fully expanded, and continue to do so daily until sufficient fruits are set for the crop. The atmosphere should be kept dry, a little ventilation being given at night to prevent the deposition of moisture on the flowers. Supply earth to the sides of the ridge or hillock as the fruit swells. Water carefully, yet encourage and sustain root action by a proper amount of moisture in the soil. Syringing will only be required on fine afternoons. Maintain a night temperature of 65° to 70°, and 70° to 75° by day, advancing to 85° or 90° from sun heat. To ripen the fruit properly at this season a brisk heat should be maintained by day.

Peaches and Nectarines.—*Early Forced Trees.*—The trees have now shed their leaves, and may be syringed with water at a temperature of 140°. It must not, however, be used carelessly; if too hot it will injure the trees, if lower in temperature it is useless against brown scale, red spider, thrips, and brown aphid. All the houses should be subjected to the hot water treatment, as simple, effective, and safe for cleansing, on the score of both fungoid germs and insect pests. The trees being loosened from the trellis, and tied in small bundles for facilitating cleansing operations, wash the woodwork with a brush and paraffin, soft soap, or carbolic hard soap, reaching every angle and crevice. Limewash the walls, and if required, paint the wood and wirework. Pruning will be a light affair, merely thinning the shoots where crowded or too weak for carrying fine fruits, no shortening being necessary except for the production of shoots for extension or furnishing the trees with bearing wood. Remove the loose surface soil down to the roots, and supply about a couple of inches depth of fresh loam, containing about a fourth of well-decomposed manure, and about 7 lbs. of bone superphosphate, and 3½ lbs. of double sulphate of potash and magnesia to each cartload. Avoid mulchings of manure at this time; they exclude air. If the roof-lights have been removed they need not be replaced until the time arrives for starting the trees. Where the roof-lights are fixed admit air to the fullest extent constantly.

Early Forced Trees in Pots.—The trees must be top-dressed. It is best done before the leaves have fallen, as fresh roots are pushed at once, and this makes a difference in the setting. Roots outside the pots should be cut off, and some soil removed all round the inside of the pots. Add new soil and ram it firmly. Give a good watering, and plunge the pots in ashes level with the rims in an open but sheltered situation till forcing time. From Alexander, Early Louise, Hale's Early, and Stirling, the best results are produced.

Root-pruning and lifting of established trees must be deferred until the leaves give indications of falling, but these operations are best performed as soon as the wood is sufficiently matured, and whilst the leaves or some of them are upon the trees.

Late Houses.—The bright weather has snited the late varieties, and where water and nourishment has been supplied liberally the fruit has attained a large size, and is strikingly beautiful, as well as excellent in quality. The trees must still have sufficient water, though a somewhat drier condition at the roots is desirable when the fruits are ripening than when they are swelling, but if kept too dry the fruit is mealy. A free circulation of air is necessary, utilising the sun heat if the fruit is backward, as with ventilation early in the day the temperature may run up to 85° or 90°, which is preferable to fire heat at a later period.

Strawberries in Pots.—Runners not over-early, rooted on account of the dry weather may now be placed in 5-inch pots. We have found La Grosse Sucrée, Royal Sovereign, Vicomtesse Hericart de Thury, Noble, Sir Joseph Paxton, Lucas, Gunton Park, and British Queen excellent for early work. Plants potted some time ago should be examined, and if making side buds too numerous they, where fine fruits are desired, should be removed with a pointed piece of hard wood, so as to throw the vigour into the central crown. If the plants grow vigorously liquid manure will not be required, but those that are weakly should have supplies of it twice a week. Remove all runners as they appear, and loosen the surface of the soil. As the plants grow set the pots correspondingly wider apart, so as to secure good exposure of the foliage to light and air.—ST. ALBANS.

TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Zephyranthes candida (A. L.).—You will find this pretty bulbous plant useful for the purpose of edging shady walks where there may not be an urgent need for any stouter edging. In light soil, and kept moist, you will have a serviceable return of pure white, somewhat Crocus-like flowers at this season of the year. Plant the bulbs $3\frac{1}{2}$ inches deep in the springtime. During winter it is advisable to slightly cover the bulbs with a protective dressing, such as leaf soil. Zephyr Flower and Swamp Lily are colloquial names applied to plants of the genus *Zephyranthes*.

Is *Magnolia Lenné Hardy*? (J. C. S.)—This variety, *M. obovata* Lenné is a hardy deciduous shrub, or low tree, and succeeds admirably outdoors, but is all the better for a sheltered situation, and flowers in April or May. We have it very fine in a position sheltered from the north by trees at a distance, and also from east and west winds, but not so near as to shade the *Magnolias*. The soil is of a loamy nature, inclined to be gravelly, with a gravelly subsoil, and this incumbent on chalk with flints. The plant would be best planted out, or if kept in the pot this must be plunged over the rim.

Tool for Ascertaining Moisture of Soil—Apple Trees with Holes in Leaves—Cox's Orange Pippin not Blossoming (C. C. E.).—Yes, there is a tool to take a sample of the soil from 2 to 3 feet deep in order to ascertain if it be moist or otherwise, and it is called the "Subsoil Tester," and is an excellent implement for determining the condition of the subsoil. It is made of wrought iron galvanised with turned hardwood handle, price 5s., or nickel handle 7s. 6d., and is sold by Messrs. Wood & Son, Limited, Wood Green, London, N. The leaves of the Apple trees full of small holes when expanded may have been attacked by small caterpillars as suggested, but is more likely the work of beetles or weevils, especially as you never found any caterpillars on the trees, the other pests being nocturnal in their feeding habits. Spraying with Paris green betimes would certainly have mitigated the damage, if not prevented it entirely. The practice of spraying with Paris green is an excellent one, especially when in combination with dilute Bordeaux mixture, so as to settle leaf-eating pests and also prevent fungoid attacks. Spraying should commence before the buds unfold, again just before the blossoms expand, and again as soon as the petals have fallen, repeating yet again in about a fortnight or three weeks after the third spraying. Perhaps the Cox's Orange Pippin would blossom more regularly if supplied with superphosphate of lime 10 parts, and double sulphate of potash and magnesia 5 parts, adding part sulphate of iron, and applying

4 ozs. of the mixture per square yard in the autumn after the leaves have fallen and the pruning effected, extending from the stem to a little beyond the spread of the branches. It should be very lightly pointed in. Thanks for the note that "Allington" Apple is doing very well, and promises to be one of our very best dessert varieties, though in quality not in the same street with Cox's Orange Pippin. Also glad the Roses have been very good, than which no greater proof can be had than of "some 5000 persons honouring you with a visit in one week."

Good Effects of Thinning Fruit Blossoms.—Last spring my Duchess Apple promised to be full of bloom, but at a very early stage I noticed it did not look at all healthy, and as I did not think it forward enough for frost to have affected it, I determined to examine a truss of bloom by thinning it. I think I may say I took away three out of every five blooms, and in nearly every truss of bloom I discovered a tiny grub or maggot, which I considered was quite sufficient to account for the unhealthy appearance of the bloom buds, although my other trees looked all right. I ventured to thin the bloom on them at the same rate; in all three cases the result has been most satisfactory. I have known Cox's Orange many years, but have never seen the fruit so fine before, and my little Ingestries are quite big, and a truss of bloom

out at the present time. I shall not hesitate to thin bloom again. I believe every flower I left set fruit in each variety. I have had much practice in thinning fruit of different kinds, but never to thin bloom before.—ALICE BAKER. [Your experience is very valuable, and the record of it cannot be otherwise than instructive and useful to the many readers of the *Journal of Horticulture*. The "tiny grub or maggot" you discovered in the blossom was probably that of the Apple-blossom weevil, *Anthonomus pomorum*, which makes a small hole in an unopened flower bud by means of its little jaws, placed at the extremity of the long curved proboscis or snout, with which these long-nosed weevils are furnished. She—it is the female—then lays one egg in the hole, and with the help of her proboscis, closes the opening; she then goes on to another bud, and may continue egg-laying for some time. The larvæ, or grubs, hatch out in about a week, and though the bud grows, and the petals are of the usual colour, the blossoms presently wither, and inside, in place of the stamens and pistillate organs, which have been destroyed, is found a curved, fleshy, whitish, wrinkled maggot, legless, with a few hairs, and a black horny head. Thus the grub destroys the blossom and the prospect of fruit. The plan you adopted is an excellent one, as the Apple-blossom weevil grubs are not only got rid of, and future mischief prevented in the following season so far as they are concerned, but the weakly blossoms, quite apart from the "tiny grub or maggot" in your case, are removed, and as these are not likely to set, or if setting, fruit not calculated to swell properly, the nutriment they would appropriate is set free, and concentrated on the blossoms and embryonic fruit. This is favorable to a good set and swelling of the fruit in the early stages, and it is continued right along, as there are relatively fewer fruits, and they attain to higher perfection in consequence. The fact of removing the small, puny blossoms, and reserving the finest and most promising, implies greater advantages for the superior fruit setting, and it is a practice too little performed, many trees blossoming too freely, and often producing indifferent fruit, for no other reason than over-flowering, while in some cases the trees cast all the "fruit" through exhaustion in flowering, which timely thinning of the blossom in not a few instances would have prevented. By all means thin your blossoms.]



ZEPHYRANTHES CANDIDA.

Grapes Scalded (Reader).—As Lady Downe's Seedling suffers so extensively every year, and the other Vines in the house are not injured, the best advice we can give you is to train up an additional cane from the best of the other sorts and remove the rod of Lady Downe's entirely. This variety is very prone to have its berries scalded. The cause of the injury is not so much in the border as in deficient ventilation. Scalding usually arises from air not being admitted sufficiently early in the morning. Do not damp down late in the afternoon, and it is advisable to leave a chink of air on theinery all night.

Names of Fruit (A.).—Peach Early Ascot. (F. C. S.).—Plum Cox's Emperor. (M. H. S.).—Apple Ribston Pippin.

Names of Plants (Sidney Hand).—1, *Prunus pissardi*; 2, *Rhus typhina*; 3, *Leycesteria formosa*. (W. Howson).—*Erica carnea*. (J. C. S.).—*Leonurus* sp. (J. D.).—*Lythrum Salicaria rosea*. (M. H. S.).—*Origanum officinalis* var., or *Marjoram*. (J. B.).—*Rondeletia speciosa* major; 3, *Fuchsia triphylla* *superba*. (A. L. F.).—1, *Helenium Newmanni*; 2, *Salvia virgata*; 3, *Polygonum lanigerum*. (F.).—*Pinus rigidus*. (A Reader).—*Francoa ramosa*. (John).—*Tritonia* is now the proper generic name for what were recently called *Montbretias*. (Arthur Jacks).—1, *Sophora japonica*; 2, *Fagus sylvatica pendula*; 3, *Phyllostachys auricoma*.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Black-Arch Moth.

DURING the whole of last month the Black-arch moth, the male of which is represented in our drawing, could be found, during the day-time, with closed wings upon the trunks of Oaks and other trees. It is the *Psilura monacha* of some entomologists, and the *Bombyx* or *Liparis monacha* of others. The males



BLACK-ARCH MOTH.

are smaller than the females, measuring about 1½ inch across the opened forewings, whilst the females usually measure an inch more. The colour of the moth is a creamy white, spotted and streaked with black, in the manner here shown. The hind wings are dusky. The antennae are black, and the body dusky, tinged above with pink. The caterpillar is ashy brown, with tufts of reddish hair on the back, and a black, heart-shaped spot on the second segment of its body. It probably varies in colour according to the plant on which it has fed, for it is by no means particular in its nourishment. It feeds on the leaves of the Scotch Fir, Bramble, Birch, Apple, Oak, Elm, Aspen, Lime, and Willow. The caterpillars appear in June and July. They have never appeared very abundant in this country, but in Prussia and France, at the end of last century, they did so much injury that M. Beckstein says that it "would not be replaced in a hundred years." In 1829, at Stettin, 400 acres of Pines, Oaks, Birches, and Beeches were entirely stripped of their leaves by them.

Phenological Observations.

SEPT. 6TH TO SEPT. 12TH.

PLANTS DEDICATED TO EACH DAY.

6 Fri.	Gossamer floats.	Autumn Dandelion.
7 Sat.	Red-under wing moth seen.	Golden Starwort.
8 Sun.	Dog Rose casts its leaves.	"Amellus."
9 Mon.	Great titmouse sings again.	Canadian Golden Rod.
10 Tu.	Scotch Fir leaves fall.	Autumnal Crocus.
11 Wed.	Horse flies swarm.	Variegated Meadow Saffron.
12 Thr.	Harvest stored.	Peltate Passion Flower.

Trade Catalogues Received.

H. Cannell & Sons, Swanley, Kent.—*Bulbs, Strawberries, and Small Fruits.*
James Craven & Co., 2, Manners Street, Wellington, Shropshire.—*Craven's Seed Annual.*
Dickson's, Chester.—*Bulbs, &c.*
J. R. Pearson & Sons, Chilwell Nurseries, Lowdham, Notts.—*Hardy Fruits for the Midlands.*
Ant. Rozen & Son, Overveen, near Haarlem, Holland.—*Dutch and Cape Bulbs, &c.*

Covent Garden Market.—September 4th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush. ...	2 0	to 4 0	Melons, each ...	0 9	to 2 0
" dessert ...	3 0	5 0	Pears, French Williams, 48s. per case... ..	3 9	4 0
Bananas ...	8 0	12 0	Pears, English, ½ sieve ...	2 0	6 0
Damsons, ½ sieve ...	1 6	2 0	Pines, St. Michael's, each	3 0	4 6
Figs, green, doz. ...	1 6	2 0	Plums, ½ sieve ...	1 0	3 0
Grapes, Hamburgh, lb. ...	0 6	1 6	" Green Gages, ½ sieve	2 0	3 6
" Muscat ...	1 6	3 0			
Lemons, Naples, case ...	24 0	30 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2 0	to 3 0	Lettuce, cos, doz. ...	1 0	to 2 0
" Jerusalem, sieve	1 6	0 0	Mushrooms, forced, lb. ...	0 8	0 9
Batavia, doz. ...	2 0	0 0	Mustard and Cress, pnnt.	0 2	0 0
Beans, French, bushel ...	3 0	4 0	Parsley, doz. bnchs. ...	2 0	5 0
Beet, red, doz. ...	0 6	0 0	Peas, bush. ...	4 0	0 0
Cabbages, tally ...	1 6	3 0	Potatoes, English, ct. ...	4 0	6 0
Carrots, new, doz. bnch.	3 0	7 0	Radishes, doz. ...	0 6	0 9
Corn Salad, strike ...	1 0	1 3	Shallots, lb. ...	0 2	0 3
Cucumbers, doz. ...	2 0	3 0	Spinach, bush. ...	2 0	3 0
Endive, doz. ...	1 0	1 3	Tomatoes, English, lb. ...	0 2	0 2½
Herbs, bunch ...	0 2	0 0	Turnips, doz. bnch. ...	2 0	3 0
Horseradish, bnch ...	1 0	0 0	Watercress, doz. ...	0 6	0 8
Leeks, bunch ...	0 1½	0 2	Veg. Marrows, per fall ...	1 6	2 0

Average Wholesale Prices.—Plants in Pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5 0	to 12 0	Ficus elastica, doz. ...	9 0	to 12 0
Araucaria, doz. ...	12 0	30 0	Foliage plants, var., each	1 0	5 0
Aspidistra, doz. ...	18 0	36 0	Lycopodiums, doz. ...	3 0	0 0
Campanula isophylla ...	4 0	6 0	Marguerite Daisy, doz. ...	3 0	4 0
Crotons, doz. ...	18 0	30 0	Myrtles, doz. ...	6 0	9 0
Dracæna, var., doz. ...	12 0	30 0	Palms, in var., doz. ...	15 0	30 0
Dracæna, viridis, doz. ...	9 0	18 0	" specimens ...	21 0	63 0
Ferns, var., doz. ...	4 0	18 0	Shrubs, in pots ...	4 0	6 0
Ferns, small, 100 ...	10 0	16 0			

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1 0	to 2 0	Marguerites, white, doz. bunches ...	1 0	to 2 0
Carnations, 12 blooms ...	0 6	0 9	" yellow, doz. bnchs. ...	0 6	1 0
Cattleyas, doz. ...	18 0	0 0	Odontoglossums ...	3 0	4 0
Eucharis, doz. ...	1 0	2 0	Roses, Niphetos, white, doz. ...	1 0	2 0
Gardenias, doz. ...	1 6	2 0	" pink, doz. ...	0 6	1 0
Geranium, scarlet, doz. bunches ...	3 0	0 0	" yellow, doz. (Perles) ...	1 0	1 6
Gladioli, doz. bnchs. ...	4 0	6 0	" red, doz. ...	0 6	1 0
Gypsophila, doz. bnchs. ...	3 0	0 0	Smilax, bunch ...	2 0	2 6
Lilium lancifolium album	0 9	1 0	Stephanotis, doz. ...	1 6	2 0
" rubrum	0 6	1 0	Stock, white, doz. bnchs. ...	1 6	2 0
" longiflorum ...	2 0	2 6	Sweet Peas, white, doz. bunches ...	3 0	0 0
Lily of the Valley, 12 bnchs	12 0	18 0	" coloured, doz. bnchs. ...	3 0	0 0
Maidenhair Fern, dozen bnchs. ...	3 0	4 0	Tuberoses, gross ...	1 6	2 0
Mignonette, English, doz. ...	0 9	1 6			



Are We to Sow Wheat?

SURELY it is a puzzle to decide what to do for the best. Wheat is, as usual, meeting a very sluggish market, and there is every appearance that prices may fall to 24s. or 25s. per quarter. With new Oats making 20s., or very nearly that, there is considerable force in the argument as against Wheat. Most certainly 6 quarters of Oats may be grown as easily as 4 quarters of Wheat, and therefore the former crop has all the arithmetic in its favour, but the suitability of the soil for Oats is a strong factor in the case, and on dry shallow soils we should hesitate before substituting them for Wheat, which withstands drought so much better, and does not take so much out of the land. Farmers of experience and close observation must agree with us in stating that Wheat is far less exhausting to the soil than either Oats or Barley. Oat straw is excellent fodder, but the chaff is valueless for such a purpose, whereas Wheat chaff makes good food for

all kinds of stock. There is one strong argument in favour of the Oat, and that is the spring seed-time, which, in following ley, allows the pasturage to be grazed until the new year, a very important matter in these days, when so much depends on the success of the live stock. On the other hand, an increase of spring-sown crops also means an addition to the pressure of spring work, for, whatever may be the impression of lookers-on, occupiers of farms chiefly arable know full well that spring is the season which most taxes the labour resources of the farm. It seems, then, that there are good reasons for continuing the growth of a moderate breadth of Wheat. What variety to grow depends much on the land and on the course of cropping. The old Square-head and Square-head's Master both do well after a Potato fallow. The last named does well almost anywhere, but Square-head does not thrive on very light soil after ley. Carter's Standup is a capital yielder, and bears out its name by seldom lodging, but it is only suitable for very good soils in high condition. Under ordinary circumstances it does not grow enough straw, and the straw supply is now too important a matter to be made a secondary consideration. In order to obtain more straw some of our friends, and in more than one county, have resumed the cultivation of the old variety called Rivett's, or Cone Wheat. It is bearded like Barley, and grows 5 or 6 feet high, producing much greater bulk of straw than the general run of modern varieties. It also stands up well, but the grain is not so good as other Wheat, though at the most there is not more than 2s. per quarter difference in the value, as it is sufficiently good to meet the requirements of the roller mill. The straw is very stout, and makes much better that than Rye. Though this Wheat is more suitable for heavy land, it will do well on medium soils, crops of 6 to 7 quarters per acre being nothing uncommon. With straw such a desideratum, and the grain at practically one value, we commend this Wheat to the consideration of our readers.

Threshing.

Though Barley should remain in stack at least a month before being threshed, the time for this operation will come ere long. Too little care is often taken in the threshing of Barley, the farmer generally being well satisfied if he thinks nothing be left in the straw. The spoiling of his sample through the presence of peeled or broken grains he takes too much as a matter of course as unavoidable, generally attributing it to the influence of the season. Such damage is not always easy to prevent, but we believe it may be to a great extent reduced. The too close setting of the drum is often the active cause, though in many cases the hummeller is at fault. The use of the latter, however, may be dispensed with altogether, for though the presence of long awns will give a rough appearance to the sample, experienced buyers will take no exception on that account, and will be loth to miss an unbroken parcel. In connection with this matter, we notice that during the Inverness Show of the Highland Agricultural Society, the attention of Scotch farmers was most seriously drawn to its importance by speakers at a public meeting, and they were strongly advised to take every possible care to avoid damage during the threshing process if they expected to meet with any proper demand for their Barley. Some malting firms—we may mention Messrs. Gilstrap of Newark for one—offer prizes each season for the samples of Barley purchased by them, which on delivery are found to be most free from broken, bruised, or peeled grains. A prize of £25 being worth the winning, farmers who sell to Messrs. Gilstrap naturally take a practical interest in the condition and setting of the threshing machines which they employ, as well as in the proper dressing of the samples when they are threshed; but no dressing machine will remove bruised or peeled Corn from the bulk, therefore is it the more necessary to closely superintend the threshing. There is no time when the master's eye and attention are more needed than on threshing days, and how often do we find the master absent on those occasions. How very frequently it happens that the work is delayed until the day of the weekly Corn market, when, after getting a good start, the master goes off with a sample, and leaves matters to the charge of his foreman, or perhaps to no one in particular. Experienced farmers know how difficult it is to get a thoroughly fair sample until the whole of a lot of Corn has been knocked out, and it is the man who takes a sample haphazard from the machine tail during the forenoon, shows it on the market as being undressed, but sells it on the understanding that it shall be well dressed before delivery, this is the man who has disputes with his customers, and has his stuff thrown back on his hands. When Corn is threshed, especially Barley, it should not be left in sacks, but shot down in the granary, and thrown up in a heap with a wooden shovel. After four or five quarters have been shot a scuttleful should be taken from the face of the heap, and put aside, to which similar quantities must be added after each additional four or five quarters have been put to the main heap. If this small heap be then well mixed together, and dressed over with a machine, a fair saleable sample of the bulk must be the result. The master's attention is especially necessary at the top as well as the bottom of the

stack, to see that no sprouted or mouldy sheaves are threshed amongst the sound ones, so spoiling a good sample. Such sheaves are better kept out altogether, and given to the pigs as they are.

Work on the Home Farm.

That the terrific storm of wind and rain which we have just experienced did not occur at the beginning of the harvest gives great cause for thankfulness. Farmers can insure against hail, but not against wind, and the destruction to standing crops by such a wind must have been enormous. As it is, the small portion of Corn left in the fields is scattered in all directions, and we have yet to learn the extent of the damage to badly roofed stacks. It will be a pity if the supply of fine coloury Barley is lessened by the influence of sprouted roofs. The careful farmer has all his Barley well protected by batts of Wheat straw until the thatcher gets to work, but in too many cases Wheat batts have not been available until the threshing machine has paid a visit.

The rain is very welcome to farmers who have all their Corn well saved, for attempts at setting out the ridges for ley ploughing have revealed a very hard state of the soil, and a good deal more moisture will be required to make it plough well. Turnips, too, were throwing out signals of distress in the shape of mildewed patches, especially on very dry soils, and moist weather is just what they want. There is every appearance that Potato growers will have a late season for their harvest, though the results may be satisfactory as regards bulk, for a great many fields are now in full bloom, with every appearance of continued growth, which will not be discouraged by the recent rains. There is no sign of disease, of which there should be little danger unless it puts in an appearance soon. This epidemic is generally coincident with one of Mushrooms; we welcome the latter, but not the other.

With a late start, we foresee much difficulty in getting the Potatoes gathered. Men will be very scarce, and the new sixth standard rule will prevent thousands of active children from earning a little useful money. The arranging of school holidays to cover the Potato picking is now condemned as jobbery. Poor farmers!

Cultivators are at work in all directions, and it is astonishing how quickly farmers get their stubbles broken up nowadays; they are, perforce, made alive to the value of an autumn fallow by the stern necessity to save all useless labour. With fine weather we shall soon have plenty of twitch fires. The practice is contrary to strict agricultural economy, but it saves labour, the farmer's most costly item.

Breeders of early lambs have already got the rams with the ewes. White faced rams are almost unsaleable, and everyone seems to be bent on cross-breeding. What wonder, when wool is worth so little, and cross-bred mutton is so good to sell.

Fruit and Corn.—In the West of England grain has been harvested in splendid condition. Immense quantities of Mushrooms are now being gathered and sent to the markets, and the Blackberry crop is very heavy. Apples are a moderate crop, but Plums are plentiful, and are selling at from 2d. to 3d. a lb. for choice fruit.

Decrease in Size of Farms.—That farms are getting smaller is demonstrated by a writer in "World's Work." In 1890 there were 4,564,641 farms in the country. There are to-day 5,700,000 and over, showing an increase in ten years of nearly 1,140,000 farms. This increase has arisen from two causes—the settlement of Government lands in America and the division of great farms. We used to be told, ten or fifteen years ago, that the farms were being consolidated and that the bonanza farm would be that of the future. On the contrary, since 1850 there has been a constant decrease in the average size of farms; in that year it was 203 acres, in 1890 it was 137 acres.

Land Improved by Consumption of Cake.—It is often difficult to get at the unexhausted value of cake, &c., consumed on the land, and there are some who think that this is often over-estimated. The following example will show that there is, nevertheless, a real value resulting from the use of rich food. In 1897 three plots of pasture land were fenced off into small fields of 3 acres each by Professor Somerville. These he stocked with sheep to which he fed decorticated cotton cake on one plot during the summers of 1897 and 1898. During that period 5½ cwt. of cake was consumed on each acre. During 1899 and 1900 the sheep received grass only. The cake used cost 32s. 6d., and calculating the live weight increase at 3½d. per pound, there was already a profit of 38s. 9d. on that expenditure, with a prospect of some residual value still to be obtained. Two years after the cake ceased to be used the gain in live weight on the plot where it was fed from the use of pasture alone was almost as great as it was the first year when the cake was given in addition to the grass. If this had been on a farm on which the outgoing tenant had used 2½ cwt. per acre of decorticated cotton cake during each of the last two years of his tenancy and claimed compensation for the unexhausted manurial ingredients, there would be, in the increase in mutton produced during the two following years, a fair indication of what would be the residual value of that cake to an incoming tenant.

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Journal of Horticulture.

THURSDAY, SEPTEMBER 12, 1901.

Vegetable Carnivora.



PARVELLOUS! said a gentleman deeply interested in plant life on first seeing the wonderful mechanism of *Dionæa muscipula* in action. By a little forcible persuasion a beetle had been induced to enter those fatal jaws for his (the gentleman's) especial benefit. "No getting back?" he interrogatively remarked. No! no freedom from that embrace—the embrace of death, for the more the animal struggles the more the vegetable won't let go. The only chance would be in perfect quiet, when, as happens occasionally, the spring lashe; unlace, and the hapless one walks out to life and liberty.

Memory well serves to recall the conversation which followed in that particular garden, then noted for its comprehensive collection of carnivorous plants. At that particular time, too, men's minds were exercised by the doctrine of evolution, and the incident recounted led to speculating as to whether these plants, although so wonderful now, were, possibly, the mere degenerate descendants of a race endowed with terror to primeval man. Who shall say? Or what mental vision shall penetrate the mist between us and "the Beginning," "when yonder spheres sublime, pealed their first notes to sound the march of Time." We do know that there were giants in those days, and although it is scarcely possible for imagination to conjure up from the lapse of ages the shriek of some Simian ancestor when snapped up by a huge *Dionæa*, it is not difficult to surmise that forms as strange and monstrous then existed in the vegetable kingdom as they did in the animal world. The discussion resolved itself into such conclusions, but the farther from the practical the nearer dangerous ground. One should only reason from what they know, and, alas! we know so little. Even Science when unravelling the web finds at last the threads hopelessly interwoven—finds the dividing line gradually attenuated to

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a vanishing point, where she can no longer say that this is plant or that is animal. Shall we then wonder at the poetical query?

What's this I hear about the new carnivora?

Can little plants eat bugs and ants, and gnats and flies?

A sort of retrograding!

Surely the fare of flowers is air, or something sweet; they shouldn't eat,

Or do aught so degrading.

Carnivorous plants are often regarded as curiosities, nothing more. But few recognise their claims to culture, and even in some very good gardens carnivorous plants are conspicuous by their absence. It is a matter for regret that it is so. Perhaps but a little pleading of their claims is all that is necessary. Intensely interesting to the plant lover; beautiful to those who possess an eye for beauty; sufficiently mysterious in their workings to exercise the scientifically disposed; with just enough waywardness of character to exact attention from the grower; and last, probably least, that halo of romance we may enshrine them with from a remote past, are merits sufficient, it is hoped, to provide room for them in our hearts and a corner in our houses. The economic value of *Nepenthes* in the tropical Orchid house may be regarded by a superficial observer as next to *nil*, but in one place where the aerial roots of a goodly number of *Phalaenopsis* in variety formed a tempting mouthful for the marauding cockroach, these silent trappers were of distinct benefit. Statistics were started by the lad in charge to prove this, and what field days, or rather mornings, they had. "My! here's a big 'un." "Here's three." "And by the — if there ain't seven in this pitcher!" So daily count was kept by scratches on a damp wall, till such time as the lad and the little 'un went out into the world, the one on his own account, the other on somebody else's, and the writing on the wall was nothing to newcomers.

Early impressions are not easily effaced. From that time probably proceeds the feeling that no plant stove, however well furnished, is complete without Pitcher-plants, and there are no plants so capable of imparting a high tropical tone to the surroundings. If there is much mystery about their birth there is certainly but little in their culture. Heat and moisture are essential to all save one, which, from its rarity, is not likely to trouble any of our readers with its whims and fancies, for the handsome Rajah is certainly a whimsical fellow. *Nepenthes* in pots never look happily situated unless allowed to grow on uninterruptedly, to be finally supported by horizontal wires when the depending pitchers show to advantage; otherwise the ordinary teak baskets are admirably adapted to their culture. Fibrous peat with a liberal addition of sphagnum and charcoal, and a seasoning of sharp sand, forms an ideal compost, although the admixture of turfy loam is approved of by some. When the trapping season is in full swing and the fun goes on fast and furious, we have found it necessary to make these carnivora occasionally disgorge some of their toothsome morsels by inverting the pitchers, and so prevent them suffering from a surfeit, which shows itself in the pitcher bottoms becoming decayed.

Cooler-growing kinds of the carnivora possess but little less attractiveness yet all are not so easily managed. The *Odontoglossum* house and *Odontoglossum* treatment will, however, be found suitable to most of the species. In the Botanic Gardens of Trinity College, Dublin, a happy example of *Sarracenia* culture shows the ornamental capabilities of this particular genus, and much as one may admire an isolated specimen, Mr. Burbidge's method of growing these North American bog plants in groups is undoubtedly the way, the leafy trumpets, suffused and veined with bright colours, as seen in *S. Drummondii*, with the quaint, delicate-hued blossoms of *S. flava*, being peculiarly attractive. In *Darlingtonia californica* we have an unique form of the vegetable carnivora, although its weirdly fantastic shape is only fully revealed in a fine specimen, which is rare to meet with. Under these conditions it is ably described in the words of a Scottish lady as being "terribly uncanny." This, with the *Sarracenias* and little *Sundews* (*Drosera*), are capable of forming a very interesting feature in a secluded nook of the bog garden. The beauty and extraordinary character of the *Droseras* can, perhaps, only be fully appreciated when viewed under a magnifying lens. *D. dichotoma* is probably the finest of the genus, although our own British kinds, if less showy, are equally interesting.

No collection of carnivorous plants can be considered complete without a specimen of the charming New Holland Pitcher-plant, *Cephalotus follicularis*. In a cool moist corner of the Fern house, or *Odontoglossum* house, and with the additional protection afforded by a bellglass, but little difficulty obtains in growing it, although a good plant is seldom seen. It was the pet novelty of an old-time gardener—the titbit with which he was wont to regale his friends. With what an air of mystery he would lift the bellglass and point with pardonable pride to the strange Australian! Not a word from him. He waited to hear what his visitors said, and should it happen that they, devoid of the true gardening instinct, thought but little of his pet, he, indeed, thought but little of them. But—

Beauty, like wit, to judges should be shown,

K., Dublin. Both are most valued where they best are known.

Wild Flowers of Old English Gardens.

In the Campanulas, Bluebells or Harebells, we have a pleasing and popular group of native plants, long cultivated; all of them are not blue. *C. rotundifolia* seems to have been the oldest that received a name, being called the Round-leaved Blewbel, spelt thus. Harebell is also the usual spelling in gardening publications of what some argue should be Hairbell, suggested by the delicate and hair-like stalks. There was a lively discussion upon the subject a few years ago in a scientific journal, which came near to being an angry one, for it is possible to quarrel even over flowers. Yet the controversy brought out several curious facts, one of these being that the first plant to which the name of Harebell belonged was *Scilla nutans*; why, we know not, but plants have often taken appellations from animals. Probably this was the "azured Harebell" of Shakespeare, not a *Campanula*. How the name passed to the latter genus, and when, nobody could elucidate. Nor were those successful who endeavoured to make out that the original spelling of Hairbell might have been Harebell; there was no proof of any such error. Again, somebody asked whether the plants might not have been called Airbells, as many resemble in colour the air or sky. We have not exhausted the names yet, for that of Heathbell has been given to several species occurring on heaths or downs; and Witch's Thimbles is shared by them with other plants of various families; this was once common in several English counties. Canterbury Bell is a name borne by more than one *Campanula* of our gardens, but the true Canterbury Bell is *C. trachelium*, the species being once very abundant in the vicinity of that town. [*C. rotundifolia* is the Scottish Bluebell of song and story, the English Bluebell being *Scilla nutans*.]

But this Nettle-leaved Bellflower, which took the Latin specific name from its former use in affections of the throat, is a rather erratic plant. Some years ago it was growing in all directions over one of our Kentish cemeteries, even amongst the grass, and not long after it had disappeared from the place. A tall plant of vigorous growth, often with showy racemes of two or three together, London gardeners fancied it, and brought it home from the suburban woods. They soon got three varieties, a double of the ordinary colour, a single and a double white. Still more plentiful near London in the olden time was *C. rotundifolia*, the species which specially charmed the poets. Though of humbler growth than some of its relations, it has the peculiarity that the leaves often die off before the flowers expand. Occasionally the plant was grown in frames, to obtain a quantity of flowers, but it is best suited for the rock garden or sloping banks. Under cultivation the colour of the flower tends to become paler.

The prince of our British species of Bluebells or Harebells is the northern *Campanula latifolia*, a stately plant, which will sometimes reach the height of 5 feet, having a spike above half the length of the whole plant, its flowers large, of a deep blue. It has been chiefly grown in gardens of the north of England and Scotland, for it is rare towards the south; the higher its latitude the lighter its bloom usually. A garden variety, purple and white, was known early in last century; the whole plant is rather milky. We are more likely to see the rare *C. rapunculoides* in some old fashioned garden than to come upon it as a wild flower about some northern wood or field, where it may be found. It has a rough stem, leaves of a deep shining green, and a one-sided spike of purplish drooping flowers.

Then there was the Rampion, *C. rapunculus*, which held a different position in our ancestors' gardens from the other Campanulas, since it had popularity as supplying an article of food. Its long milky root was dug up and eaten any time between November and April. It is a biennial, and was raised from seed sown during May. The leaves are large, and the stalk is often 3 feet high, having a long regular panicle of light blue flowers. I think it is truly British, though in some parts of Kent and Surrey it is said to have "escaped from cultivation," possibly. The Clustered Bluebell (*C. glomerata*) is a showy native; the flowers are in blue or violet clusters on the branches and stem, under cultivation they are paler, and the plant is less luxurious. Double and white varieties have been produced. Graceful but creeping is the Ivy-leaved Bluebell, *C. hederacea*, which probably came to London gardens from Epping Forest; its slender stalked flowers are light blue.

During the dry summer weather, when many wild flowers died off, the small *Convolvulus* came up upon many fields, unaffected by the drought. It has always been common about gardens as a weed, but its larger relative has often been allowed to extend its sprays over hedgerows, or twine them around shrubs. *C. sepium* is really a handsome climber, but its bells have not the fine fragrance given off by its humbler relative, especially at night, and its colour is always white without the varying tints of *C. arvensis*. Withywind and Old Man's Nightcap are other names given to the Greater Bindweed. Both species are accounted to belong to Nature's barometer, the closing of their blossoms, particularly during the forenoon, being a sure indication of approaching rainfall.—J. R. S. C.



Laelio-Cattleya Digbyano × *C. Mendeli*, Veitch's var.

"Veitch's variety" of the above cross, which we figure this week, is one of the very best and most beautiful of the Digbyano hybrids. It was shown in grand style at the Royal Horticultural Society's meeting in the Drill Hall, Westminster, on August 27th, and was honoured with a first-class certificate. Our figure describes all but the colour, which is a most beautiful rosy lilac, tinted mauve, with a yellow spot at the base of the lip. The figure was sketched by Mr. Geo. Shayler, our artist.

The Week's Cultural Notes.

Cooler nights and shorter days render fire heat necessary in the Orchid houses now, but it must be judiciously applied. Too much will bring insects in plenty, and make the plants grow unseasonably, but by keeping the pipes just warm the air is kept moving, and in the buoyant atmosphere late or backward plants will finish their growth, and those that have done growing will be hardened. A minimum registering thermometer should always be used by inexperienced cultivators, as it is then quite easy to see whether the temperature has dropped to an unsafe point during the night. Those who are early in their houses—and all should be—can form a pretty good idea as to how things have gone in the night without a thermometer at all.

Although still rooting freely most of the distichous leaved Orchids will by now be needing less moisture, especially in the atmosphere. Even *Angraecums* and *Phalaenopsis* that are still in active growth are easily overwatered, and on occasional days drying will do them all good. *Vanda coerulea*, again, liking as it does cool treatment, will become badly spotted if allowed to remain constantly moist, the moss swelling and keeping out the air from the roots. All this section, in short, are far more likely to be overwatered than under from now onwards.

Shading cannot yet be entirely dispensed with where a miscellaneous collection of plants are grown. There are, it is true, many Orchids that need every ray of light possible, such as the *Dendrobiums*, most of the *Epidendrums*, *Cattleyas*, and *Laelias*, but when these are grouped with such sensitive plants as *Phalaenopsis*, for instance, there are even now bright bursts of sunshine that will be too much for the latter. Sometimes it is possible to so arrange the plants that the necessary position can be shaded with an ordinary garden mat or a piece of tiffany, and this, of course, is an advantage, as it allows of the proper shading being removed.

Thunias may now be shaken out of the compost, tied up in loose bundles, and labelled, and suspended from the roof of a light house in an inconspicuous position. This will be found preferable to placing them under stages, where they are apt to catch the drip, while at the same time it saves stage room. The pretty *Coelogyne cristata* requires plenty of moisture now, both at the roots and in the atmosphere, to develop the new pseudo-bulbs and insure strength to the plants when the flower spikes are forming, but overhead syringing can only be permitted on warm sunny mornings.

Dendrobium Dearei.

It is close on twenty years ago that Colonel Deare found this pretty *Dendrobium* on one of the islands of the Philippine group, where, judging from the immense number of specimens sent home, it is very abundant. Just now it is in fine condition in many collections, its pure white flowers being abundantly produced on six or seven-flowered peduncles. When first introduced many growers found some difficulty in cultivating this plant, but fortunately it is now found more amenable to culture. I have an idea that many of the earlier plants were collected at a bad season, and this may in a measure account for some failures, but where sufficient heat is at command growers may take up its culture with every prospect of success. Heat and very abundant atmospheric moisture, with all the sunlight possible in autumn after the flowers are past, are what the plants delight in. They flower upon the young green stems principally, though sometimes a few flowers occur on the older growth. Some of the finest plants I ever had were grown on a shelf at the back of a Pine stove, the moist heat arising from the tan suiting them well. Moderate sized pots or baskets are most suitable.—H. R. R.

Walk Edgings.

As the various Roman causeways, which intersected the cultivated parts of this country during the time that world-renowned people held possession of it, have all a row of larger stones at the edge than in the centre, an "edging" was not unknown at that early period. From that time down to the present period highway footpaths, street pavements, and causeways of dwellings, from the palace down to the cottage, some sort of margin bounded and still bounds them. Confining my remarks to garden edgings, it seems agreed on that a "live" edging is most agreeable, and of subjects Box stands pre-eminent. Its hardihood, durability, general appearance, and not least its association with the home, from that of the children's garden up to the artistic terrace parterre, for generations place it by general acclaim in the front rank and foremost therein. The Box, like many other plants, has divided itself into varieties, differing in their dwarfness or robustness of habit, the extremes being denominated "tree" and dwarf or "edging Box." Between these extremes there are intermediate kinds, too coarse for edging purposes in many places, though not in all; and in those situations where the very dwarfest refuses to grow, this stronger growing one may be utilised with advantage. The grand secret in making a Box edging is to make sure that all the edging planted in one place be of a kind. Cutting and trimming will not make up for the unevenness of growth that takes place where the dwarf and robust kinds are intermixed, nor will the appearance be good if half one and half the other are placed in the same line. It is necessary, therefore, to be very exact in having the Box true.

Another very important point in connection with forming an edging of Box is that of being careful that the ground on which it is planted be all alike in quality, and not to have the roots of one piece luxuriating in the rich soil of the kitchen garden, and another struggling for existence amongst the gravel or other material the walk may be made of. Neglect of these matters results in a diversity of growth, an eyesore for all time, or until such time as replanting is effected on a sound principle. Of course Box has its likes and dislikes. There are soils as well as places where it almost refuses to grow. Naturally it affects a calcareous soil, and yet thrives on sandy land, almost so light as to drift before the wind; succeeds on all good loams, and even on retentive land, always provided it is well drained. Stiff, heavy, unctuous, wet ground does not suit Box, and where Sorrel is found very abundantly it does not appear to be at home. The adage, "Good gardening is not where Box edging will not grow," has no confirmation in practice, for excellent and well kept gardens exist where Box has been tried repeatedly and perished piecemeal. Such cases prove that the soils do not possess in sufficient quantities the necessary ingredients in which Box lives, or, on the other hand, some which it dislikes, consequently, after dragging out a miserable existence, it dies, piece after piece, until the edging becomes no edging. But Box may fail from effects of position. Its reputed hardihood is often severely taxed in low-lying situations, where spring frosts often nip and even blacken the young growths. This is probably due to the sun acting on the frozen Box, as in lines running north and south the eastern side of the edging suffers more severely than the western. Nevertheless, Box thrives in exposed situations, therefore no one need be afraid to plant it at elevations of 500 feet above sea level, or even higher, for I have had splendid edgings to garden walks at that altitude in North Yorkshire.

Box edgings are perhaps best made in the early autumn, and in early spring not later than April. The middle of the growing season is the worst for planting Box, and it cannot or should not be planted in frosty weather. In moist soils the Box slips are often put in without any root, especially when early planting is practised. It is always advisable, however, to have some roots to each division of the Box, always keeping the plants well down in the soil, and so that little trimming will be required at planting. This should only be performed to form an even width and regular height of the edging. It should be planted firmly, in order to keep it dwarf. Whenever it is planted in dry weather it should have the advantage of water for some time afterwards, and it will seldom fail to grow, even when its roots have been much curtailed.

Established edgings of Box may be successfully trimmed into order during August and September. For this purpose damp, dull weather is the most suitable time. Its mutilated leaves are not then subjected to the scorching influence of the sun until a partial recovery takes place, and the same may be said of those interior leaves which, having been long concealed, are not able to bear exposure to hot sunshine with impunity. By cutting Box at this season a part of its summer growth will also be retained, which will look well the remainder of the year. When much manipulation has to be performed, as is necessary where the cutting has been neglected annually, the late spring is the best time, choosing mild and damp weather, then the plants will push new growth from even bare wood, and become

quite fresh again in a few weeks, requiring only a little trimming in August to make even, and have a very neat appearance.

Of late years strong objection has been taken to Box edgings on account of their harbouring slugs and other predatory pests. There is something, and often a great deal in this, therefore recourse has been had to edgings that give no trouble after forming, always providing they are substantial, not abused, and weather-proof. Badly burned brick, tile, and similar edging that are liable to suffer from severe frost, are worse than useless. Such edgings, however, are much in vogue, especially for kitchen gardens, and when the bricks, tiles, or other article are well burned, so as to withstand all weather, very suitable. Even the back paths, or thoroughfares, ought to have boundary marks to denote how far they ought legitimately to extend; these, however, had better be of either brick or stone of some kind sunk in the ground. Hard-burned or blue bricks make a very good edging, laid either edge or endways up, where traffic is supposed to pass over them. For gardens they look best when laid angleways up, like the ridge of a house, and if done carefully they look remarkably neat. Rough stones or flints will do in certain situations where there is not much traffic to displace them, but in a wilderness or other romantic situation they are the most proper. In the precincts of the mansion or dressed grounds a prepared substance, or something that represents it in terra cotta or plaster way, would doubtless be preferred. Stone edging, perhaps best of all, is expensive, ranging from 2s. 3d. to 5s. 6d. per yard, with an extra 3d. to 1s. for curves, according to pattern. Garden border edging or tiles cost 3d. to 4½d. per yard, or 12s. to 15s. per 100, and when properly set are neat and durable.—G. A.

Somersetshire Notes.

Apples.

JOURNEYING through the eastern portion of the county one cannot help being struck with the well-laden orchards, scattered in some places thickly, in other districts in isolated farmsteads; nor could the thought escape one's notice that little progress seems to have been made in the improvement and extension of fruit culture on grass. The trees, a great many of them, are by no means young, and the varieties not those likely to command a good and remunerative sale. I am told that great quantities find their way to northern and midland cities, packed in barrels, but the prices rule so low that expenses are not met in their packing, carriage, &c. There are a quantity grown of local Apples whose names are absolute strangers to the garden and general nursery catalogues. There were in some of those ripe and ripening a very refreshing and appetising aroma arising from heaps lying in the orchard and from the trees themselves; this perfume pervaded the air for some distance, carried on the wind. Somerset has long been famous for its cider, and no doubt much of the fruit now growing will become cider in course of time, for the use, if not the enjoyment, of the rural population.

When it is remembered what the fruit crops of last year amounted to it is not a little surprising to see the orchards bearing such heavy loads this season; the markets were full then, they would appear to be not much less so now. Pears are not much grown as an orchard fruit, and Plums are seldom seen. In North Somerset, at least in some portions of it, trees in the orchards were very partial, some I examined without finding a trace of fruit, in others the crop was a full one. This was apparent, too, in orchards but a short distance one from the other; indeed, on one side of the highway was written "plenty," on the other "sparsity," in very plain and clear examples. Shelter, and the absence of it, no doubt accounted for this variety, not so much from frost as from the cold winds of spring.

This alternate dearth and plenty, though belonging most to the orchard land, was still not altogether unknown in the garden, for some there are in which the fulness of the season is clearly exemplified, in others there is a disappointing dearth. In one notable instance this latter state has been repeated now in two succeeding summers, and what is so remarkable is that the same garden formerly seemed so favoured, bearing crops of handsome fruits, when others in the same locality were bare and almost fruitless from the action of spring frosts. Generally, however, there are good returns in all fruits, even Strawberries, which are so sensitive to weather changes, responding well, though the season was a short one. Apples here on the whole have been fine and plentiful; one has only to visit the summer flower shows to prove this happy state. They have been not only large and numerous, but fine in colour. Beauty of Bath, now so popular as an August fruit, were beautifully coloured, so were Red Astrachan and others. Peasgood's Nonesuch, not generally a heavy cropper, has this year made an effort to claim an advance step, there being more of this than any other shown for culinary purposes. Potts' Seedling has been very good, so also has Lord Suffield and Grosvenor, Ecklinville and Warner's King.

Tomatoes.

The season, droughty as it has been, has suited the outdoor crops of Tomatoes admirably. Near Worle I saw a comparatively small plot, which the grower estimated would yield him over a ton of marketable produce. In other places, both in private and market gardens, Tomatoes everywhere bear heavy loads of clean fruit. Nor is there but little disease of any sort; in fact it could scarcely be hoped to have an outdoor crop more free from ailment. What is needed now is fine weather to make this uncertain speculation a complete success.

Soot as a Fertiliser.

In this age of fertilising manures in manufactured forms it was instructive to come across an instance where the virtues of that homely article, soot, showed such marked value on the growth of fruit trees and Tomatoes. A good quarter of Gooseberries had been planted on a level piece of ground that had all been treated alike in its earlier preparations and planting, but from unavoidable causes the soot dressing given was interrupted, one portion being so treated at an early period of the winter, and washed in by heavy rains; the other put on later in the same quantity, but was followed with a dry period. The difference in the growth of the trees was most marked, those having the benefit of an early application being quite twice the size and strength of the others, and their bearing capacity no doubt in the forthcoming years will show the value of an investment in soot. Apparently it is a fertiliser that need be used early in the winter, so that its property is early transferred to the soil, and not wasted by evaporation. The Tomatoes show similarly good results from the soot dressing given.

Wasps.

Despite the annual destruction of nests, these appear as numerous as ever in fruit-growing centres. One gardener, by paying a bronze coin for each queen wasp brought him, found that there were over a thousand captured by the end of May, mostly by his own workmen and lads; and despite this slaughter, he still finds himself the victim of the wasp, a great many nests also being destroyed by the use of cyanide of potassium. We have found the Abol syringe a most economical aid in the application of this poison to wasp nests, as the fine spray injected into the nest passage makes it more deadly in its action, and requires less to effect the same ends.

Border Flowers and Annuals

have been unusually fine in some of the Somerset gardens, Asters in particular being exceptionally good. Some gardens around Bridgwater produced many prize-winning stands at the west country shows, and this, too, in the company of those who make Asters a speciality. This is due to one of two reasons, either there was ample water to be given by hand, or the moist nature of the ground supported plant growth well without so much aid from irrigation. The meadow land intersected by the railways demonstrated clearly in the greenness of the herbage the presence of more natural moisture than many have been favoured with in gardens and fields elsewhere. Roses were wonderfully good in their first flower, but the later crop was retarded by the drought and tropical nature of the weather. Rain coming later developed latent growth, and the results, though not equal to that of some more favoured summers, were on the whole satisfactory.

Birds.

Tomtits and blackbirds in particular have been most voracious, and attack and destroy such a quantity of fruit; and late sown Peas have also suffered considerably from small birds. It is the gardens that are situated near woods and plantations, favouring their nesting, which suffer so much from their depredations. The shooting and trapping of them do not appear to diminish their numbers appreciably. Much complaint is heard of the blackbird attacking winter Pears on the trees; Apples and Plums, even those on the walls, have not escaped molestation. For Strawberry beds one Somerset gardener found coloured flags a good bird scare; another, by fixing up some wire netting around his beds, so that they could not reach the beds without flying over it, and having a chair and gun close by, managed by a little early morning effort to effect a saving of his fruit. In this instance, however, it must be said that his garden was not surrounded by woods, and his Strawberry beds not scattered about the garden, as is often the case.

The cry raised by non-fruit-growing bird lovers that these take fruit because of thirst is a very foolish and unqualified one, because so often there are natural water sources in or near gardens from which they can easily obtain drink. I have myself tried the plan advanced by these bird advocates of placing water in suitable receptacles for their use, but it did not by any means diminish their fruit-eating propensities. Whatever good may be done by these particular birds, it is much more than counterbalanced by the damage done in the fruit time, and certainly they deserve to be "struck off the rolls" among those that are scheduled for protection.—S. W.

Massing Bulbs in Shrubberies.

ONE of the most effective ways of growing bulbs is to place them in large masses in a well-cultivated border, between or in front of evergreen and deciduous shrubs. If the shrubs in the border are not overcrowded, the whole of the border will not be occupied with their roots, but there will be an ample depth of soil, and sufficient room for more or less fair sized clumps of spring-flowering bulbs.

in good well-drained soil. Place the bulbs not less than 4 inches deep. Gladioli should be planted in March and early April in clumps of six to twelve, placing the corms 4 inches deep. *G. Branchleyensis*, *G. Gandavensis*, *G. Lemoinei*, and *G. ramosus* are good and showy for this purpose.

In coming to the bulbs which naturally flower in spring, it will be most convenient to consider them in their order of flowering. First of all to flower are Snowdrops, so bold masses of these ought to be planted towards the front of the border, alternating with equally



LÆLIO-CATTLEYA DIGBYANO × C. MENDELI, VEITCHS' VAR. (See page 237.)

To give them a fair chance the shrubs must be kept within bounds, which is easily done if attended to annually. The tallest bulbs which should be employed in a border of this character are Lilioms and Gladioli.

These, however, are not spring-flowering, but give a display in summer and autumn. Lilioms should be planted in March with the exception of *L. candidum*, which is best planted at once. Among the most suitable for outdoor culture are *L. Martagon* or Turk's Cap, *L. croceum*, Orange Lily, *L. tigrinum*, Tiger Lily; also varieties of *L. speciosum* and *L. auratum* will grow and flower splendidly outdoors

good clumps of Crocuses and *Scilla sibirica*. The masses of Crocuses may be in distinct colours—yellow, white, blue and striped. The Crocuses will follow the Snowdrops in blooming, after which the Scillas will be in beauty. *Scilla campanulata* blooms later in the season. Masses of these may be planted under trees, where they will make a brilliant display. Daffodils come next in order of blooming, the common English Daffodil and the Lent Lily being admirable for bold effect during March. Other varieties ought also to be included, such as *biflorus*, *Cynosure*, *incomparabilis* double and single, *Leedsii*, *nanus*, *Princeps*, *Sir Watkin*, *Trumpet major*, and *Pheasant's Eye*.—E.

NOTES & NOTICES

Weather in London.—The weather of the past week has been variable. Sometimes rain appeared imminent, though very few showers have, on the whole, fallen. Again, the winds have been at times cold, changing to warmth and closeness later. Thursday last, the 5th, was bright and fair.

The Chrysanthemum Season.—Our entomologist, "J. R. S. C." (whose current articles on "Wild Flowers of Old English Gardens" are creating much interest), in a letter to us says:—"The Chrysanthemum season has come, and I should be glad to hear of any Lepidopterous (moth or butterfly) larvæ found upon the leaves or flowers." Therefore, will those of our readers whose Chrysanthemums appear to be injured by a "grub" take advantage of "J. R. S. C.'s" offer of assistance? We trust they will.

Plums from Chertsey.—"Whilst we are in the season of Plums, with rather too many of them, I thought a few might gratify the editorial palate, and be refreshing. I hope you may have many years to preside over 'our Journal.'—Yours faithfully, A. J. BROWN." Such was the kindly letter sent, together with a grand boxful of Plums, from the able superintendent of the Farm and Garden Department of the School of Handicrafts at Chertsey, Surrey. We were delighted with them, most luscious as they were.

The Colorado Beetle.—The Board of Trade desire to advise growers of Potatoes of the danger which would threaten the Potato crop should the above voracious insect become established and common in this country. By the Destructive Insects Act, 1877, all persons are required to inform the police if any specimens of the beetle are found, under penalty not exceeding £10. A similar penalty is prescribed for keeping or selling any living specimens of the insect in any of its stages of life. The Colorado beetle recently appeared among Potatoes on the premises belonging to the London and India Dock Company at Tilbury Docks.

Rhus cotinus: A Correction.—Owing to some misplacement amongst photographs in our possession, the illustration of *Rhus cotinus*, on page 227 of last week's issue, was erroneously stated to have been produced from a photograph taken in the grounds of T. W. Webley, Esq., The Uplands, Selly Hill, near Birmingham. Instead of that the illustration represented a specimen growing in the grounds of Alfred Antrobus, Esq., at Fernwood, Erdington, near Birmingham. We regret the inadvertence that caused the error, and at the same time may mention that we shall shortly be able to furnish a view of Mr. Antrobus' house, and another of choice *Coniferae* grown by him.

Appointments.—Mr. Edwin Collins, for the past three and half years head gardener to H. E. Hoare, Esq., Danbury Palace, Chelmsford, has been appointed head gardener to J. S. Strange, Esq., Denham Court, Winchester. * * Mr. Thomas Gill, as head gardener to Sir Thomas C. Meyrick, Bart., Apley Castle, Wellington, Shropshire. * * Mr. S. McLean, who has been for the last six years head gardener at Rahinston House, Enfield, co. Meath, has been appointed in similar capacity to Moore O'Farrel, Esq., Ballyna House, Enfield, co. Meath. * * Mr. James Hamilton, who has been foreman for the last three years at Crawfordsburn, co. Down, has been appointed head gardener to Captain R. H. Fowler, D.L., Rahinston House, Enfield, co. Meath, and enters upon his duties on the 16th September.

Dahlia Show at the Royal Aquarium.—This exhibition, which will be held at the Royal Aquarium on September 17th, 18th, and 19th, takes the place of the Dahlia Show formerly held by the National Chrysanthemum Society. It is supported by the principal Dahlia cultivators and exhibitors on the grounds that it affords an opportunity for the Dahlia to be exhibited in central London, and supplies a convenient occasion for the submitting the later flowering seedlings for inspection. The schedule of prizes has been extended, and classes for every type of Dahlia find a place in it. In connection with this show, Messrs. Dobbie & Co., seed merchants, Rothesay, offer valuable special prizes for their pedigree Leeks and Onions, and it is certain that the display will be both numerous and very fine. Schedules of prizes can be obtained of the superintendent, Mr. Richard Dean, 42, Ranelagh Road, Ealing, W.

National Dahlia Society.—A committee meeting will be held, by kind permission of the Horticultural Club, at their rooms at the Hotel Windsor, Victoria Street, Westminster, on Tuesday, September 24th, 1901, to commence at 4 P.M.—J. F. HUDSON, *Hon. Sec.*

A demonstration in "Summer Management of Fruit Trees and General Horticultural Subjects" was given at St. Stephens-in-Branwell recently, by Mr. C. Ilott, lecturer on fruit culture to the County Council, in the rectory gardens. There was a good attendance, and the lecture was interesting and instructive. Mr. Ilott specially recommended the culture of Asparagus and Tomatoes, the Cornish climate being well adapted for them, and both being easily and profitably grown.

A Heavy Potato.—The Potato crop in the Lincolnshire, Cambridgeshire, and Huntingdonshire fens is one of the best known for several years. Some of the tubers are of extraordinary size, and one specimen taken from Wisbech to the London market by Mr. Holden, a well-known merchant, this week is said to have weighed 5 lbs., being about a foot long and 8 inches in diameter. Fifty acres of Potatoes in Thorney fens, grown by Mr. Jackson, have averaged £16 4s. an acre, the best, estimated to average 10 tons, making £12 10s. an acre.

Scottish Horticultural Association.—The monthly meeting of this association was held in 5, St. Andrew's Square, on Tuesday, 9th September, Mr. Comfort, president, in the chair. There was a very large attendance of members. After a large number of new members had been elected and proposed, Mr. Geo. Gordon, V.M.H., of London, read a paper entitled "Roses for Garden Decoration." Mr. Gordon kept the meeting listening most attentively for an hour, reviewing in a most lucid manner the various aspects of Rose growing for decorative purposes; how to plant, how to grow, and how to enjoy them. The paper was received most enthusiastically by the large audience, and a most hearty vote of thanks was accorded him. The table was exceedingly gay with a large number of choice and most attractive exhibits. Messrs. Thos. Methven & Sons exhibited a large collection of beautiful blooms of early flowering Chrysanthemums. There were about twenty-four varieties in all the best and newest varieties, and were much admired. Mr. R. W. E. Murray exhibited a new seedling Potato "The King," which was referred for trial to the council. Messrs. Todd & Co. had a very beautiful exhibit of Roses, a very handsome vase of cut Asters, which was considered the most beautiful exhibit of Asters ever seen, also a large pan of Aster plants in beautiful bloom. Mr. Todd had also an elegant vase of *Coreopsis grandiflora*. A vote of thanks was awarded the exhibitors.

Journal of the Royal Horticultural Society.—Parts 1 and 2 of volume xxvi. of the above have now been issued to all Fellows of the Royal Horticultural Society, whose address is 117, Victoria Street, Westminster, S.W. Besides containing the full text of the papers read at the fortnightly meetings held in the Drill Hall, Westminster, the Journal also includes a large amount of useful information on odd subjects by the secretary, Rev. W. Wilks, M.A.; the superintendent of the society's gardens at Chiswick, and by other able contributors. A new feature of the issue now before us is the pages devoted to notes on recent research, extracted from current periodical literature, British and foreign, affecting horticulture, and horticultural and botanical science. Such excerpts must be of very great value to those whose interests they touch, and, being varied, their usefulness must apply to a great number of the Fellows. The essays herein contained are largely of a scientific character, though pregnant with information from which the advanced scientific horticulturist can find assistance if applied to practice. Professor Beach's paper on the "Treatment of Diseases and Insects" is perhaps too much American to be an important help in this country, but it is a paper which everyone should peruse if he or she would know the most up-to-date preventives and resources applied against diseases or insects of fruit trees and plants. Prof. Henslow affords much that interests one in his contributions to popular botany, while other scientists, well known to all of us, and prominent practitioners, have papers, whose full text, as we state, is printed in this Journal. We may print one or more of these essays for the benefit of non-Fellows. All who can possibly afford a guinea a year, however, ought to join the Royal Horticultural Society, for the sake of receiving its Journal, if nothing more. Names forwarded to us will be placed before Mr. Wilks. The latter is to be complimented on his successful management of the Journal, and the increase of the Fellows who now shall receive it.

The Bulb Season.—Our issue for Thursday, September 19th, will be specially devoted to articles on bulbous plants, and will contain an unusual number of handsome and instructive illustrations.

Bedding at Hampton Court and Hyde Park.—From what we have seen of London bedding lately, the two places named above are the most pleasingly adorned in this respect. In another week or ten days the increasing rigours of autumn will begin to be apparent in the fading appearance of the plants and flowers, so that all who contemplate a journey to see the Hampton Court, Hyde Park, and other London parks' bedding, ought to do so very soon. It will be worth while too.

United Horticultural Benefit and Provident Society.—The usual monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last; Mr. C. H. Curtis presided. The minutes of the last meeting were read and passed. Three new members were elected. Five members are on the sick fund, and three others have been on the fund and off again since the last meeting. The treasurer stated that he had invested £500 in Cardiff Corporation 3 per cent. stock for £485 15s. The annual dinner will be held on Wednesday, October 9th, at 6.30 P.M., at the Holborn Restaurant, on which occasion Mr. Peter E. Kay, V.M.H., will preside.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighborhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

Ragley Gardens, Alcester.—Recently the gardens and pleasure grounds surrounding Ragley Hall were, by kind permission of Mr. C. H. Oliverson, thrown open to the public, collecting boxes being placed here and there on behalf of the garden charities. The afternoon was delightfully fine, and over a thousand persons availed themselves of the opportunity to view the unsurpassed grounds and flower gardens. In the latter upwards of sixty thousand bedding plants are used in an original and effective manner, the large pyramids of Plumbago, and Ivy and Zonal Geraniums being greatly admired. A cricket match—Arrow and Ragley v. Gardeners and the District—proved a success, the gardeners gaining a most decisive victory. The amount collected in the boxes was £3 12s. 9d., and this with other gifts will benefit the funds to the extent of upwards of £5. The head gardener (Mr. Christie) and his staff are deserving of the highest praise, not only for the handsome display, but for the kindness and courtesy extended to visitors on this and every other occasion.

Liverpool Amateur Gardeners'.—A most successful meeting in connection with the above branch was held in the Common Hall, Hackney, last Thursday, when every portion of the room was crowded to excess with a most beautiful collection of flowers and plants, and I feel sure that had the committee the slightest idea of the large number of exhibits that they would have taken the larger room in preference. The night was hospital night, and many valuable gifts were sent away. It is astonishing the progress that is being made by members, not only in the growth of the plants, but also in the matter of putting up to the best advantage. For the best epergne Miss Hunter not only won the prize but the society's certificate, the arrangement being excellently done with Begonia and Fuchsia flowers and Maidenhair Fern. Mrs. Stevenson showed many good plants, gaining the special prize for a pretty Kentia, the open class with a beautiful Fuchsia, and a division for the open out bloom class. Mr. Morris greatly distinguished himself in Cactus and double Dahlias, gaining out of a strong competition the silver and bronze medals kindly presented by the secretary, Mr. McGregor. Mrs. Morris was also successful with four very extra bunches of cut flowers, and second with grand Asters, Miss Hunter being also a prizewinner. Mr. Ellison had the best Fern and the best foliage plants, two fine Coleus. Mr. Robins secured the president's prize with a splendid assortment of cut blooms. Tomatoes from Mr. Hitchmough were high class, as were Mr. Paddock's Asters. An exquisite photo came from Mr. Tinsley.—R.P.R.

Horticultural Directory.—We are informed that our statement on page 225 of last week's issue, that the above publication would be the only horticultural directory hereafter to be published, was incorrect. We regret to have been misinformed in this matter.

Crocuses in September.—Mr. Church, a resident on the Marine Parade at Yarmouth, on going into his cellar found that some Crocus bulbs that he had stored there had burst into bloom, and he was able to gather and wear a nosegay of purple Crocuses that attracted some attention throughout Wednesday last. These were not Colchicums.

American Hybridisation Conference.—An international conference is to be held in New York in September 1902 on plant breeding and hybridisation. The Royal Horticultural Society has been invited to send delegates, and Mr. W. Bateson, M.A., F.R.S., and Mr. George Nicholson, V.M.H., have consented to represent the society at the conference.

Hornsey and District Dahlia Society, September 10th.—This was the first exhibition of a society which is likely to grow into one of some importance, seeing that Dahlias are being grown in many gardens in Hornsey, and there is a broad and distinct desire to excel. The society has commenced with a model schedule of prizes in the National Hall, and though Dahlias were the main feature of the schedule, Ferns in pots were invited, also hardy flowers in bunches, and vegetables. Of Show Dahlias Mr. E. Hows, North Finchley, was the principal exhibitor. The best eight varieties of Cactus Dahlias came from Mr. J. Stevens, gardener to S. B. Boby, Esq., Hornsey Lane; vases of six and twelve blooms were shown. Messrs. Hows and C. L. Dearlove, Stapleton Hall Road, had good blooms of Cactus Dahlias, shown in sixes. Pompon varieties in good character were shown by Messrs. A. Taylor and E. Hows. Baskets of vegetables made a good feature. Tomatoes, Potatoes, Carrots, &c., were decidedly creditable; many of the working men of Hornsey grow them well. Messrs. W. Cutbush and Sons, Highgate Nurseries, staged a large and attractive collection of Cactus Dahlias, backed by plants. Mr. Amos Perry, Winchmore Hill, had a very interesting collection of hardy flowers. Mr. A. E. Myers, Hornsey, had a large collection of fruit of good quality. Mr. Murphy had a collection of Cacti, and a collection of plants in addition, and Mr. H. C. Green, gardener to W. B. Lister, Esq., Hornsey, had some Capsicums in fruit, and also some Coleus. Mr. F. J. Pateman, the hon. sec., deserves great credit for working up so meritorious an exhibition.

August Weather at Belvoir Castle, Grantham, 1901.—The wind was in a westerly direction twenty-one days. The total rainfall was 1.39 inch, this fell on ten days, and is 1.27 inch below the average for the month; the greatest daily fall was 0.35 inch on the 25th. Barometer (corrected and reduced): highest reading, 30.500 inches on the 20th at 9 A.M.; lowest reading, 29.345 inches on the 26th at 9 A.M. Thermometers: highest in the shade, 86° on the 10th; lowest, 40° on the 21st; mean of daily maxima, 70.45°; mean of daily minima, 50.51°; mean temperature of the month, 60.98°; lowest on the grass, 38° on the 21st and 28th; highest in the sun, 137° on the 8th; mean temperature of the earth at 3 feet, 60.74°. Total sunshine, 208 hours 10 minutes, which is 42 hours 28 minutes above the average for the month. There were no sunless days.—W. H. DIVERS.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
September.		deg.	deg.	deg.	deg.	In.	deg.	deg.	deg.	deg.
Sunday .. 1	S. E.	57.9	51.9	65.8	53.0	—	61.5	61.1	59.7	49.5
Monday .. 2	S. E.	58.2	51.4	61.4	42.5	—	59.8	61.0	59.5	35.8
Tuesday 3	E. S. E.	58.2	51.3	61.7	63.5	—	58.4	60.3	59.4	50.0
Wed'sday 4	E. S. E.	60.9	51.3	64.8	53.8	—	58.2	59.9	59.4	47.3
Thursday 5	E. S. E.	58.4	52.3	65.2	44.2	—	58.1	59.7	59.1	35.2
Friday . 6	E. S. E.	58.9	52.0	65.4	40.9	—	58.8	59.3	59.0	31.9
Saturday 7	E. S. E.	61.9	56.3	69.2	44.8	—	57.8	59.1	58.8	37.2
MEANS		59.2	52.4	65.2	47.5	Total	58.7	60.1	59.3	41.0

A week of dull weather with strong, cold wind.



Scabbed Potatoes.

In reference to the inquiries about the scabbing of Potatoes, I have seen it very often, but mostly in a warm sunny season and on light sandy soil, and it occurs to me that it arises from the soil being so hot that it blisters the skin of the Potato when it is in a tender state. At the same time I am told that if lime is applied to the soil the Potatoes are sure to be scabbed. Scabbed Potatoes are generally very dry and good, and they are always drier in a dry warm season than in one the reverse. There is a little blight to be seen in this county, which is famous for Potatoes. It is of importance to raise new varieties from seed, and to abandon the old sorts, as they are more liable to blight than those recently raised from seed.—A., *Ormiston, N.B.*

Seedling Briers.

Last autumn I obtained a few hundreds of seedling Briers, strong plants, for budding this season. They were planted in rich ground and grew freely, but I cannot say that they have proved a very satisfactory investment so far. Perhaps those who have grown them on a larger scale will be able to tell me whether it is usual for them to have such a very short crooked space between the roots and the collar of the plant as mine have. It is with the greatest difficulty that room has been found to insert a bud at all in the main stock; and when this is done, so crooked and knotty is the stem, that many of the buds have failed to unite on account of the uneven surface on which the plate of the bud rests. Altogether it seems to me to be a troublesome and fidgetty stock to bud compared with the Manetti; and unless the future growth of the bud makes up in a marked manner for the extra trouble in budding, I shall most certainly stick to the Manetti for dwarf Roses, even if seedling Briers can be obtained at 1s. 6d. a hundred.—R. W.

Strawberry Notes.

The Strawberry crop has been very bad with us this season, owing to the very hot and dry weather experienced during the time when fruits were swelling and ripening. The rainfall has been below the average, indeed, there has not been enough at one time to reach the roots, all through the late spring and summer; what there has been was dried out again directly. Although heavy storms and much rain has fallen all round, it has not yet been our turn, and we still badly need a good soaking rain. Strawberries suffered much, the plants lying flat on the soil day after day, especially varieties with large foliage, such as Royal Sovereign and Sir Joseph Paxton. Early sorts did best, but midseason as well as later ones dried up instead of ripening. The fruit was a long time ripening, contained very little juice, and not at all its natural flavour, the only variety that did well being Héricart de Thury. Our soil is rather light, and this Strawberry does better than stronger-growing varieties, especially in a dry summer. It is a favourite of mine; although an old one, and not one of the most profitable, it is one of the best for a gentleman's garden. The fruit is rather small, but a beautiful bright colour, and one of the best for preserving. I consider it one of the best flavoured Strawberries. It ripens just a little before Royal Sovereign. The latter does well here, it is a serviceable variety, producing large fruit, very firm, consequently good for travelling long distances. It is a good variety for forcing.

President is a good old standard variety; it grows very freely, produces heavy crops of large fruit, and is very sweet—too much so to suit some people's taste. The well known Sir Joseph Paxton does not do so well in our rather light soil as it does in soil of a heavier nature, but fruits well, and is one of the best midseason varieties. Noble absolutely refuses to grow; there are so many better varieties that will, so its loss is not much consequence. Empress of India and Lord Suffield are good flavoured Strawberries; they do not grow very well, however, and are shy fruiters, so I have discarded them. Gunton Park, another of Mr. Allan's raisings, is a very good Strawberry. In some lists it is called an early sort, but I find it rather a late one, having gathered fruit as late as August. The fruit is a beautiful dark red, rather large, sometimes uneven; flavour is very good, and it remains a long time in good condition. Monarch does not do very well; it produces large fruit, but very few of them. Leader and Latest of All are included in our collection, but have not grown them in sufficient quantity to say much about them. Waterloo is a very distinct Strawberry, both in colour, shape, and flavour; it is a very good late kind; I have gathered fruit as late as the first week in September from a bed on the north side of a wall. The fruit is very dark red, and of a rather acid flavour, but it is a useful one to grow where late Strawberries are appreciated.—J. S. U.

Hyacinths in Glasses.

Probably there is nothing original in my way of growing Hyacinths, yet as I do not know of anyone using it, except on my recommendation, it may be worth sending to you. It is this: The ordinary glasses which are used for growing Hyacinths in water are filled with rotten dung and leaf mould, and about an inch of soil on the top, in which is planted the bulb. There is no drainage. The advantages I think are, equal vigour with those in pots, but better than in pots, having less evaporation from the soil, and thus more healthful for dwelling-houses, and requiring less attention in watering; the wire supports are available if required, neater in appearance. I have tried the plan for five or six years with good results. Last season the best spikes of flower were got this way as it happened, though those in pots were about equal.—H. T.

Ravenscourt Park, London.

SAVE Richmond Park, the one named above is the most westerly situated of London public parks, and can be seen by anyone travelling from the City outward on the District Railway to Ealing or Kew. The railway bridge spans the park near its southern extremity, and being high above it, the traveller obtains a delightful bird's-eye view of one of the prettiest parts of this recreation ground. With commendable taste, Mr. Gingell, the superintendent here, has clothed the arches of the railway bridge with Ivy, so that in place of being an eyesore, the spans are really an architectural adornment. Readers who are unacquainted with the exact location, and who have visited the gardens of the Royal Horticultural Society at Chiswick, will picture its position when we say that it is within twenty minutes' walk north-east from the latter place.

Two of our illustrations this week represent views in the park, and beyond referring to them, we have little need for further notice, they explain themselves so well. Thousands of the residents in the neighbourhood, which includes part of Chiswick, Turnham Green, Shepherd's Bush, and Hammersmith, enjoy the shady Elm tree avenues in this park and the beauty of the flowers throughout the long summer, while on certain evenings, and always on Sundays, the London County Council furnish a splendid band. This park is supervised by the above named Council.

In the centre of the grounds, a building, which was formerly a private residence before the area had passed under public control, has been converted into a quaintly handsome library, with news rooms and the offices that usually accompany a public place such as this. Covered with Ivy, Roses, and Ampelopsis, and surrounded by borders of hardy plants, this must surely appeal to all of those inclined to the indulgence in sentimental reveries as Utopian in its several aspects. Here are the tools of knowledge amassed and offered to whosoever will, and the characteristic dinginess that almost consistently accompanies libraries and their entourage is found as a most delightful exception at Ravenscourt Park.

The total area amounts roughly to 34 acres, which have been modelled on true public park plans. The paths are wide, smooth, and convenient. Mr. Gingell has arranged tennis and croquet courts, and only last spring he finished a large and well placed bowling green, for the game of bowls, like that of golf, is annually becoming more popular. Then, again, the aspect of the grounds has been materially improved by the judicious arrangement of suitable shrubs, whose merits, either in the points of colour or beauty of form, are generally commended.

In one portion of the contour the depression was so accented as to constitute a grave scenic defect, while rendering that special portion of the park useless for purposes of recreation. The superintendent set about filling up the hollow, extensive though it was. The results, when he had done, were most satisfactory, for, not resting at merely levelling the "toom," he persevered till an approvable elevation had been raised, and that piece of ground now forms a comparatively high point of vantage, and is adorned with shrubs, Ferns, and hardy plants.

Here and there, as I have already stated, groups of shrubs, mostly with bright hued foliage, have been planted. It is Mr. Gingell's purpose to gradually introduce midsummer flowering shrubs, as well as spring and autumn bloomers; for of the spring decorative shrubs he thinks there are sufficient already. What is required is some others, in variety, to carry on the display throughout the season. Of course park superintendents have largely to act under the direction of the various committees and councils that just now and then insist on displaying—red tape! Therefore, patience is a very necessary virtue with our friends who manage the public parks.

Amongst the shrubs in the belts skirting the park are Olearia Haasti, Prunus Pissardi, Aucubas, Mezereons, Mock Orange, Golden Privet, Hibiscus, Acers in variety, Lilacs, Laburnums, Crataegus, Cytisus, Ailanthus, Phyllostachys, Arundinarias, Rhus typhina, and other fine subjects. All are well cared for. In front of those borders

that mostly meet the public vision are bold masses of the best and most showy herbaceous perennial and annual plants. Few of the London parks can boast of having a fruitful orchard as one of their features, yet here at Ravenscourt, tons of Pears are gathered every year from a plantation of old trees running along the eastern limit. I had the privilege of tasting some splendid fruits of the common and well-known old Hesse. There are a number of very good varieties included in the collection. The fruit is stored for a time, and afterwards disposed of, by sale I believe.

Before concluding these notes attention will be called to some of the bedding combinations, also to a botanic garden for the use of

Garden (oh, dear!) you set about seeking out the superintendent of the park to inform him of your enterprise and request. Then, but not till then, has he the power to unlock the gate for you. It is thus that our authorities stimulate the love for, and study of, botany.

And now for a line or two about the bedding. One of the prettiest little beds was a round one filled with *Coleus Verschaffelti*, red; and above this *Fuchsia gracilis variegata*. The gracefulness and light colouring of the latter contrasted beautifully, though if the Fuchsias had been taller the effect would have been better still. A noble bed of the yellow-flowered *Canna Comte de Bouchard* furnished a handsome feature in a corner of one of the large, smooth lawns. *Acalypha*



SCROLL BED IN RAVENSCOURT PARK.

students. The latter feature was inaugurated by the London County Council in some of its parks—if not all—a few years ago. Here, again, however, the red tape binds up the keys of the gate that leads through to this garden, which might otherwise be a useful one, but at present it is not; it more resembles a cemetery. The beds are all there, and the plants carefully named and arranged according to their Natural Orders; everything, in fact, is first-rate; but, bless my heart! the garden is under lock and key ("By Order"), and if you or I, or anybody else, wished to get in there and learn the names of garden and medicinal plants (if nothing more), we would be bound to write to the head of some Parks Department or other, who in turn would authorise someone else to consider and execute the reply; and eventually, armed with your Ticket of Admission to the Botanic

musaica above *Chlorophytum variegatum*, as may be imagined, was also most pleasing, while other fine contrasts are furnished by pitting such as yellow *Celosia pyramidalis* against an under colour of *Alternanthera major* or *A. amœna*, or red *Celosias* against the yellow *Alternanthera*. *Begonia Corbeille de Feu* ("Ball of Fire") by itself was very fine. *Abutilon Thompsoni* and *Iresine Lindenii*, of course, always come out effectively. Throughout the grounds there are numerous clumps of five to seven single-stemmed *Rhus typhina*'s, and here and there *Phyllostachys*, Privet, Cedars, Birches, and other beautiful arboreal or arborescent subjects. Scroll beds (see illustration), and some neat carpet beds on the verdant and smoothly shaven lawns, add yet other features of interest and brightness to this, one of London's most lovely parks.—W. W.

Gadding and Gathering.

"HERE 'AWA, THERE 'AWA."

The Old Rose Gardens, Colchester.

Messrs. B. R. Cant & Sons have recently entered the ranks of Rose hybridists, for it is a patent fact that all extensive cultivators of the Rose for commercial purposes do not attempt to raise new varieties; the bulk of the commercialists, indeed, are merely nurserymen, that is, they raise stocks of existing sorts, but seldom emanate improved varieties as a result of any hybridising effort of theirs. Amongst the new varieties that have already gained considerable reputation, whose origin was here, are the H.P. Ben Cant, and the Tea-scented Mrs. B. R. Cant.

Climbing and pillar Roses were in extraordinary profusion. The pretty new pink-flowered Euphrosyne, laden with flowers, formed a very special feature. Near by it were handsome masses of Dundee Rambler, and it may be mentioned in passing that in the Old Rose Gardens there is perhaps the tallest and most prodigious hedge of this floriferous variety to be found anywhere in the United Kingdom. The Garland is too well known to call for description; but Rosa fimbriata cannot be said to be yet so popular. The flower has each a nicely frilled edge, hence the name. Then R. polyantha grandiflora, which recently figured in our pages, adds another of the climbing Roses to the select list. Such a trio as the yellow Rambler, R. Aglaia; the Dawson Rose, pink and early flowering; and, thirdly, Aimee Vibert, are worthy of all attention. The Dawson Rose resulted from crossing H.P. Général Jacqueminot with R. multiflora. It is a very showy Rambler Rose, and suitable for effective massing in large beds in the open grounds. Thalia ought also to be included.

Amongst the brightest and best of the bedding Roses comes Fabvier, happily known to nearly all of us. Fellenberg, with the deepest of rose pink flower cluster, is equally desirable, and the two Lameschs, both new—to wit, Eugénie Lamesch and Leonie Lamesch, are capital bedding acquisitions. Both are worthy of the very highest praise. The former somewhat approximates to Aglaia in colour, but the latter has a charming and wonderful combination of colours. It may simply be described as orange-scarlet toned or suffused with cherry red. They should not be overlooked. Eugénie Lamesch was accorded an award of merit in the Drill Hall on July 30th. Irene Watts, Madame E. Resal, Gloire de Polyantha, Cecile Brunner (very like Perle d'Or), and Anna Marie de Montravel, are all suitable and commendable bedding and general decorative garden Roses.

Of course, many varieties, principally useful for the ornamentation of gardens, can also be obtained in high form for the exhibition tables. Such is the case with the Noisette Rêve d'Or.

Georges Schwartz promises to be one of the finest and most distinct dwarf Roses, suitable for a variety of purposes, that has recently been acquired. The flowers are pale yellow—a rare Rose colour, and the foliage is of a dark ruddy shade. All in all, this is one of the best novelties the Messrs. B. R. Cant & Sons are offering.

All the well known indispensable varieties are grown liberally, for the Rose grounds cover acres. R. rubrifolia, with glaucous and red tinted stems and foliage, has all of a sudden sprung into popular use as an adjunct in floral decorations. Rosa indica sanguinea occupies the same place amongst bedding Roses that La Fayette Begonia does amongst those of its genus. It is the finest deep coloured, glowing, cherry-red variety one could find in a day's march anywhere. The Tea Golden Gate might be noted, and, of course, Maman Cochet and White Maman Cochet can never be done without. Those who lack that comparatively new variety Mrs. Ed. Mawley would be very well advised were they to resolve upon getting it; in the Rose analysis it must stand high. Mrs. Bosanquet, with pale creamy white flowers, and Laurette Messimy, with lilac-rose flowers, are both vigorous. The Chinas are all serviceable, and amongst these the crimson and common Chinas are preferable to others. H.P. Gloire de Margottin can only be cited, and before concluding one must recognise the claims of such other Hybrid Perpetual varieties as Marquis of Londonderry, Marie Rady, Le Havre, Margaret Dickson, Mrs. Cocker (both the latter are grand to say the least), A. K. Williams, never better than it was during the dry weather of July; Captain Hayward; Black Prince, splendid in dry weather; Prince Arthur, of which the same may be said; and Prince Camille de Rohan.

That excellent variety, Suzanne Marie Rodocanachi, has also been in Al condition during the past summer, not forgetting Xavier Olibo, one of the best of dark crimsons when it can be obtained at its best. Tom Wood is, perhaps, not always dependable, yet is a fine Rose; Victor Hugo, Ulrich Brunner, and Alfred Colomb, with varying shades of red, are exhibition Roses of the first water.

Messrs. B. R. Cant & Sons offer what they term "The Dean's Collection" of Roses. This refers to the selection of all-round meritorious varieties of the Rose which the veteran Dean of Rochester furnishes in his pleasant Rose book. To many cultivators the list selected by so able a rosarian must have been, and will continue to be, of great value and guidance.

The new Tea Rose Sunrise, with a glorious heterogeneity of colours, orange, salmon, pink and rose all mingled, grows out of doors and flowers fairly well in these nurseries. Souvenir de S. A. Prince, almost white, is another lovely Tea; Muriel Grahame and Comtesse de Nadaillac are also the *crème de la crème*.

A brief review must necessarily be very incomplete, yet sufficient

has perhaps been written to draw attention to the finest Roses of the season. Soon the planting season will be upon us, whence the new varieties not yet tried, or the older ones that hitherto have been omitted, may receive the consideration their merits entitle them to.

Coniferae.

TAXODIUM DISTICHUM, the deciduous or white Cypress, is a very distinct tree, and one of the few deciduous Coniferae. It grows in swamps in its native country, and is found on what are called floating islands. It is said that trees growing upon these islands send down strong roots, many feet or yards long, so as to cast anchor in the muddy bottom, rendering the island stationary. It is quite hardy, and must be planted in moist situations, being suitable for the margins of lakes or streams, where moisture at root and in the atmosphere abound. In its young state it presents a pyramidal outline, with slender spreading branches, but after arriving at maturity the upper branches frequently lengthen and the tree then assumes a broad Cedar-like aspect. The foliage is a soft and pleasing green, which changes to dull red before it falls in autumn. In its native country—the South-eastern States of North America—large conical protuberances are formed on the roots. It may be interesting to quote a paragraph from Veitch's "Manual of the Coniferae." "The roots of large trees, particularly in situations subject to inundations, become covered with conical protuberances, commonly from 18 inches to 2 feet high, and sometimes from 4 to 5 feet in thickness; they are always hollow, smooth on the surface, and covered with a reddish bark like the roots, which they resemble, also in the softness of their wood. No cause has been assigned for their existence, they are peculiar to the deciduous Cypress, and begin to appear when it is from 20 to 25 feet high. They are made use of by the negroes of the Southern States for bee-hives. These protuberances or knees are rare in England."

WELLINGTONIA GIGANTEA.—This interesting and wonderful tree was introduced in 1853, and named in compliment to the Duke of Wellington. It is also known as Sequoia gigantea, the Mammoth Tree of California. In America it is known as Washingtonia gigantea. This is the largest of existing trees, is popularly known as the King of the Forest. It remained unknown to the civilised world till the spring of 1852, when it was accidentally discovered by a hunter in the employ of the Union Water Company of California. The age of some of the trees is estimated at 3000 years, and for others a still higher antiquity is claimed. It attains a great height. Lord Richard Grosvenor in 1860 confirmed a statement which had been often repeated, that one specimen was 450 feet in height, and 116 feet in circumference. A great deal has been written about the Wellingtonia, and many interesting particulars given as to the size of certain trees and their history, which we cannot enlarge upon here. Though such a monster tree, its seed is remarkably small. In this respect seed of the Wellingtonia resembles that of the Scripture Mustard, which is amongst the least of all seeds, but when grown it is the greatest among herbs.

It will thrive in soil of very diversified quality, and in exposed situations, where many of our choice Conifers would fail. All the same, I have noticed that when planted in rather a sheltered position the trees are more dense and the foliage more green. Quite recently I was shown a number of trees that were planted almost as soon as it was introduced; 1857 I think was the year. They were growing in a very exposed and cold situation, but were good specimens, with very thick trunks and drooping branches. The leaves were darker than any I had seen previously, which may be due to the age of the tree or to the calcareous soil.

SEQUOIA SEMPERVIRENS, the Californian Redwood, is closely allied to the Wellingtonia, and takes the second place in size among the gigantic coniferous trees of North-West America, attaining a height of nearly 300 feet. It is not quite so hardy nor such a general favourite as that tree. It differs greatly in its young state from the Wellingtonia, and much resembles the common Yew. The branches are flat, the leaves arranged in two rows; they are long, linear, flat, and spreading, bright dark green above, lighter green on the under side, and rather pointed. In its native country the trunk is covered with a thick spongy bark tinged with a reddish colour, a hue that also pervades the wood, whence the popular name of the tree. Early planted trees in this country also have their trunks covered with this spongy bark. Sequoia sempervirens is a quick growing tree when planted in a warm, moist situation; it should be protected from cold winds and spring frosts, as it starts into growth early, and is liable to be injured. Indeed many Conifers that have been introduced suffer more from late spring frosts than from the severity of our winters. The Redwood is the most valuable of all the Californian timber trees to the inhabitants on the coast and in the immediate neighbourhood of the districts where it abounds, but rather on account of its cheapness and abundance than from any superior qualities it possesses.—PINUS.



Piptanthus nepalensis.—We recently saw this shrub, and of which we are able to furnish an illustration of a flower-shoot, growing in a garden in Haddingtonshire. It is not to be depended on, however, away in the North. Even at sunny, dry-oiled Kew they grow it upon a south wall, where it flowers profusely. It is not particularly showy, yet as a "rare" subject it is of interest. Choose as warm and favourable a spot as possible. Plant during the coming fall. In the extreme south it may be planted in clumps in the open ground.

Sweet Pea Miss Willmott.—Mr. H. Eokford has given the lovers of Sweet Peas many valuable novelties, but not one more worthy of extended cultivation than Miss Willmott. Not only is it an extra large flowering variety, but it is exceptionally free at the same time, many of the stems carrying three blossoms. For decoration in a out state in a mass it is exceedingly fine, its colour is so striking, yet so pleasing; the standards, which are bold, are a rich deep orange pink, the wings are heavily shaded with rose. I consider it an improved Gorgeous, which is saying a good deal. All lovers of Sweet Peas should make a note of this charming variety.—E. M.

Plants for an Aroid Collection.—The following, though not all Aroids, are what might be included in such a collection as they have in the new house at Edinburgh Botanic Garden:—*Calanthe zebrina*, *Hedychium*, *Brachyochilus Horsfieldi*, *Piper ornatum*, *Hellonias*, *Ravenalia guiensis*, *Clinogyne grandis*, *Godwinia gigas*, *Aglaonema oblongifolium*, *Philodendron Wallisi*, *Xyloaonema Manni*, *Mapania panduræfolia*, *Amorphophallus bulbifera*, *Bertolonia Houtteana*, *Epiaxia fulgida*, *Fittonias*, *Alocasia Lindenii*, *A. Sanderiana*, &c., *Asplenium marginatum*, *Selaginella grandis*, *S. inequalifolia*, *Anthurium Brownii*, *A. Jennani*, *Dieffenbachia marmorata*, *D. magnifica*, *D. Bowmanni*, *Hoffmanni discolor*, *Platynerium Willinckii*, *Caladiums*, *Monstera*, *Cissus discolor*, and numerous other stove foliage plants.

Gourds, Squashes, and Pumpkins at Kew.—On either side of the divisional walk running east and west through the herbaceous plants' ground in the Royal Gardens at Kew are annually to be seen, at this season of the year, an interesting collection of Cucurbitaceous plants. It is the colours and forms of their peculiar fruits that so much satisfies the curiosity of visitors. The seeds are sown in pots in warm houses during spring, whence the plants are gradually and steadily brought along till about the middle of June. Having been accustomed to the open air for a little while previously, they are planted out in very richly manured light soil. The position chosen is between bushy Biotas (*Cnpressus*), well sheltered and sunny. A tall knotted stake—a roughly lopped Oak branchlet would suit—is at their back, and to this the plants cling and attach themselves in the course of their development. The varieties included are chiefly variations of the species *Cucurbita Pepo* and *C. maxima*. *Cucurbita ficifolia*, of course, is distinct by itself. I believe the seeds are obtainable from some of the Paris seedsmen, or other continentals, but they may possibly be had at home here. If gardeners in the country realised the ornamental effect of the great foliage and handsome fruits of these plants, I am certain that other collections would be in evidence. It is true they are liable to failure from a variety of causes, but chiefly from boisterous and inclement weather, which "tashes" them severely; yet they are worthy of some persevering care. The following are the names of some of the *Cucurbitæ* at Kew:—Gourds (varieties of *Cucurbitus Pepo*): Spanish, Orange, Warty Skinned, Swan's Egg, Apple, Melon, Turban, Grey, Boulogne, Miniature, Bicolor Pear, Brazilian Sugar, Whale, White Pear, Mottled Pear, Umbrella, White Egg, Citron, and Olive Gourds. It will be seen that these names are strictly *natale solum*, in fact, even ludicrously colloquial. Descriptions must be reserved. The only Squash seems to be the Warted variety. There are various Marrows (*C. Pepo*), such as the Golden, Italian, Ribbed, Green-pointed, and Warted. Pumpkins (*C. maxima* vars.) are represented by the Yellow, Etampes, and Tours. All are trained to perpendicular stakes about 9 feet or 10 feet high. By the cross-fertilising agency of bees a number of the varieties, however, are not now strictly true.

Baked Tomatoes.—Peel and slice very thin four large Tomatoes. Put in a pudding dish a layer of bread crumbs, then a layer of Tomatoes, seasoning with salt, pepper, scraps of butter, and a little Onion, another layer of crumbs, and then Tomatoes. Have the top layer Tomatoes. Beat two eggs, season with salt, pour over the Tomatoes, add a cover of crumbs and a little more butter. Bake twenty-five minutes.

Open-air Peaches.—Mr. Wright at Chiswick has successfully established dwarf, outdoor bush Peach and Nectarine trees. These are exceedingly robust, and have this year borne very regular crops, especially the varieties Dr. Hogg, Early Ascot, and Barrington. Rivers' Nectarine, too, has been prominent. Situated as they are between one of the vineries and a west wall, and being, furthermore, sheltered by a wall on the north side, there is little fear of their failure from want of shelter.

Pegged-down Vines.—An instance of what can be done to assist the production of heavy crops from Vines can be seen by anyone visiting Chiswick now, or in the near future. In a house devoted to Gros Colman the superintendent some years ago pegged down the side shoots which were sent out towards the base of the single stem Vines. One shoot from either side of each Vine was simply pegged down upon the surface of the border without any notching or cutting whatever. Roots soon sprung out and fastened themselves deep in the border, so that now their assistance in assimilating nutritive matter is apparent in a most demonstrative fashion, as these layered canes are carrying three or four more bunches, and of greater weight than their parent canes. The practice is worth applying more frequently than at present obtains.

Leea amabilis.—The illustration of this stove plant on page 253, so admirably depicts it that description seems needless. Since it came into commerce about the year 1882, a very large section of gardeners have included it in their stove collections, and even amongst the choicest members one can remark an elegance and brightness in this plant that is frequently more satisfying than most of the other subjects surrounding it. The cultural data are such as any careful grower may apply with every hope of success. The upper surface of the leaves is velvety, deep bronzy green with a broad white central stripe; the veins are also white at the bases. When young the leaves are pale pinkish brown. The variety named *splendens* is distinctly superior, having bright red markings and also red stems. The species is a native of Borneo, where it was found by one of Messrs. Veitch's collectors.

Victoria regia.—Owing to a fungoid disease, the Kew specimen of the gigantic Water Lily of the Amazon died some time ago, leaving the specimen now growing at the Royal Botanic Gardens, Regent's Park, the only representative of its kind in or near London. This curious plant, *Victoria regia*, at present possesses ten well-developed leaves, the largest being over 6 feet in diameter, the whole occupying a space of 500 square feet. They are of a most brilliant green, circular in shape, with the edge turned up to a height of 4 inches, showing the deep pink underside, with its covering of sharp spines. The flowers are pure white when first open, but change to a rose tint as the petals expand, and last only two days. It is remarkable that the plant should grow from a seed no larger than a pea, and attain to its full size in a little over six months. In September, 1895, the secretary of the Regent's Park Botanic Garden, Mr. J. B. Sowerby, was photographed seated upon a leaf floating on the water. We should like to know further details on this point.

Pickled Walnuts.—These are best gathered early in summer, on a hot clear day, when they are tender enough to pierce easily with a pin. Lay them in strong salt and water, half a cup of salt to a quart of water, for several days, or until tender. Change the water every other day. Take them out, and rub them with a coarse towel, then put them where the sun will shine on them until they are black, shake them occasionally so they will be uniformly coloured. If you do not care for the dark colour, you may put them at once from the brine into cold water for half a day. When ready to pickle them, wipe the nuts dry, and fill the jars three-fourths full. Take a little more than vinegar enough to fill the jars, and to every quart allow quarter of a cup of brown sugar, twelve cloves, twelve peppercorns, twelve allspice berries, twelve cassia buds, and 1 square inch of stick cinnamon. Boil the spices in the vinegar ten minutes, then strain, and pour it boiling hot over the nuts. Repeat this twice, and, after the last time, cover close by, or seal, and put away in a cool, dry place. They should stand about a month before using.

Hardy Flower Notes.

WE ought, I suppose, to be sad at this season, as we think of the short days and the long nights, which draw fast near, and the time when flowers are few and far between. Yet, somehow, there is no feeling of sadness in our minds as we look at our own and others' gardens, for they are bright and gay, though colouring leaves tell the tale of autumn's decay and winter's approach. There is a strange mingling of desires in our hearts. We would fain enjoy to the full the present, but we have need to think of and prepare for the next year, whether we shall see it or no. There must provision be made for that other year, and already some of the earlier-ripening bulbs are in the bosom of Mother Earth, drawing from it that nourishment which will make them blossom and shine in the coming time. The thought of these will drive us from the sadness almost sure to come even amid the glory of these autumn days, when sweet flowers and ruddy fruit all appeal to our minds with gladsome thoughts. These flowers would make us linger among them as we write.

The Dahlia lover is joyful as he ponders over his great globed blooms, or as he delights in his tiny pompons, which are neatness and trimness in very quintessence. If he cares not for these formal flowers, he may wax enthusiastic over the twisted pointed-petals of his blooms of the Cactus type. These may be a little bashful, and inclined to shrink from view amid their green leaves, but we may cull them from the plants and arrange them cunningly in glasses, so as to charm us with their forms and colours.

The lover of annual flowers may delight in their varied charms; the Marigold man may grow jubilant over his Africans, packed closely with petals, or his striped French, with their blooms of black-brown and gold. The specialist in these and other flowers will find ample to admire in his favourites, while we who care most for our hardier flowers give them a fraternal greeting, and enjoy our own plants which are left to us yet. First to claim our notice, because it is comparatively new, is *Liatris graminifolia* var. *dubia*, which despite its long name, suggestive of some doubt as to its personality, is pleasing, as it shows us its tall spike of bright purple flowers crowded above the grassy leaves. It is a true "Gay Feather," whose long spike might have done for the plume of some warrior of the olden times, when marks of distinction were less fatal than in these days of ours. This species is very beautiful, though where there are so many pretty species of *Liatris* one would not venture to say that it is the best of the lot. A good grower tells us that the *Liatris*es grow best in pure sand, but I fancy that much depends upon the moisture beneath, and my own experience is that drought for any length of time is fatal to their welfare, and that in dry gardens they like a more moisture-holding soil. Yet all are not alike in their ways at home, and a reference to Britton and Brown's "Illustrated Flora of the Northern United States and Canada" will show that *L. spicata* grows in moist soil, but that the others are to be found in dry soils or on prairies. By the way, our authors already referred to, call the *Liatris*es "Lacinarias," and give us quite a choice of popular names, from Blazing Star and Button Snake-root to Colic Root, besides Gay Feather and Devil's Bit.

It seems no time since the leaves of the Meadow Saffrons or Colchicums grew brown and had to be cleared away, yet now the flowers have begun to come, and we shall ere long have them here and there all about the garden. They seem to appear mysteriously, and come "popping up like Mushrooms," as I was told the other day. To-day you may see a faint point of white spearing through the soil; to-morrow there is a chalice of ruby and white, which has appeared almost in a night. As autumn hardy flowers they have a place of their own no other plant can fill, and we might plant them more generously by the front of our borders, amid the grass, or in the rock garden, for in all these at this time we need their bright presence to give colour and beauty to otherwise dull places. Among the first here have been the pale-coloured Bertoloni, the small but pretty lætum, the chequered variegatum, in several tints of lilac or purple; the noble Bornmulleri, and the pretty little Kochi. Ere this can be in type there will be others almost galore. These Meadow Saffrons like a strongish soil, and give little trouble after planting. Yet they have a fault, for like many other things they have poisonous as well as healing properties. Any one who would eat the corms for Onions must surely have been possessed with rare fatuity, and the author of the "Flora Historica" tells us gravely that "no cattle will touch it," and that "the very lambs fly at its aspect," yet we are also told that the French call it by words meaning "Kill Dog" and "Dog's Death." If, however, we reject the Colchicum for this failing we may likewise cast from our gardens many of our most prized flowers which have similar effects when misused.

As we look at the Montbretias (*Tritonias*) we think how rapidly they have come to the front, and how much our vases of cut flowers (let alone show stands) have been indebted to these flower-

In studying this season the flowers in the stands of hardy plants in shows of various degrees of importance, one was struck with the number of Montbretias staged both for prizes and in non-competitive exhibits. One might throw out the suggestion that it is time that some of the large shows offered prizes for Montbretias alone, even if they were debarred from being shown in the larger classes for herbaceous flowers. I am certain that there would be some effective and beautiful exhibits. But this is a digression from my original intention, which was to speak of two of the newest Montbretias—those named *Germania* and *America*, both of Pfitzer's raising, and both of which I saw well shown by a southern firm from Colchester, at Glasgow Show. The first is the most distinct advance in Montbretias we have had for a long time. The large, well-opened flowers, of good colour withal, will render it a grand garden plant, and one to be sought for by exhibitors of hardy flowers. As for *America*, it has the failing of many of the Montbretias in the rather hooded form of its flowers, which do not show themselves so well as do those of *Germania*. Its value lies mainly in the deep orange-scarlet flower, and the darker eye which fills up so much of the centre of the bloom. It is, at least, a step on the way to a departure among Montbretias which may lead us to something still better. There is a big future before the Montbretias, though their place at present is by no means obscure.

As we seek to finish these notes we catch sight of Clematises in crowded clusters of bloom, or grey with feathered awns; golden Sunflowers, all unmindful of the tradition that they always turn to the sun; black, brown, or green coned Rudbeckias; gay golden Heleniums; Gladioli, surely the finest of autumn bulbous flowers; Lathyrus, in the shape of perennial and annual Peas; gay tubed *Zauschneria californica*; blood red *Pygelius capensis*; towering *Oenothera biennis* Lamarckiana, shabby by day, but glorious when evening comes; with Mexican Tigridias in almost barbaric splendour. There are sweet Roses which we shall hope to enjoy for some time yet; there are soft coloured Michaelmas Daisies in plenty, though their season is not yet fully here; there are Japan Anemones,* Neapolitan Cyclamens—truly a strange, yet happy medley of nationalities. There are hardy Fuchsias, so happy by the sea; and great Hydrangea heads, the envy of inland folks, who cannot grow them outdoors at home. More there are to strive to make us agree with Donne, who said—

No spring or summer's beauty hath such grace
As I have seen in one autumnal face.

With the recollection of the beauties of these earlier seasons fresh in our minds we may not agree, but we can still rejoice in the benison given by autumn to us all.—S. ARNOTT.

Gooseberries as Cordons.

THERE are various ways of growing Gooseberries—bushes, standards, espaliers, wall-trained trees, &c.—but there is none by which finer specimen fruit is secured than by the single cordon system. By this method the tree consists simply of one stem, with fruit spurs all the way along it. A display of cordon Gooseberry trees in pots at the Royal Horticultural Society's Show at the Westminster Drill Hall last July was a revelation to many of those who visited it, though the cordons were so short, and the leaves, owing to the recent putting of the trees into pots, so flagging, that, notwithstanding the fineness of the fruit upon the trees, many thought it was a fantastic method of growing Gooseberries, and not of much practical value. But that was a mistake, as Gooseberry cordons can be grown 6 or 8 feet long, and the whole length covered with fruit, and it is doubtful if there is any kind of fruit-growing by which so much fruit can be obtained from a given space, taking one year with another, unless it be by cordon trees of some other fruit.

To show the truth of this statement, let us suppose an acre of ground planted with cordon Gooseberries, a foot apart in the rows, the latter 4 feet apart. This would give 10,890 trees, and if a pint of green fruit and a quart of ripe fruit was picked off each tree—a very moderate estimate—and this fruit was sold, both green and ripe, to average two pence a quart, the produce would realise £135, and this might be reckoned upon not one year in two or three, but at least three out of four, and a very fair crop the fourth year. The cordons, when bought, are usually from 1 to 2 feet long. They can be trained either in an upright position or at an angle, the latter preferably, as a greater length of cordon can be grown with the same height of support by bending them down as they lengthen. If they are to be grown obliquely they should be planted slanting a little in the desired direction, and then fixed at an angle of 60°, which can be reduced to

[* Have you, Mr. Arnott, ever seen a bed of the white Japanese Anemone above a ground covering of blue Violas? The effect is splendid.]

45°, or even 30°, later on, to give them a greater length before reaching the top of their support. They can be tied up in various ways—by a stake to each or by stout supports at each end of a row, and one or two in the middle as well, if necessary, with two or three wires stretched across; or, least trouble of all, against a wall. If they are planted against a south wall, both leaves and fruit sometimes get scorched in a very hot, dry summer, such as the last, besides which, such a valuable wall can seldom be spared for them. East and west walls are the best for them, especially the latter, as with that aspect the sun does not shine upon them when the frost is on the bloom in the spring, and very early fruit, both for picking green and ripe, can be obtained, especially if the wall is a little inclined to the south-west. With Gooseberries in this position there is never any difficulty about

spur an inch long one may get four fruit buds instead of three; while of the animal manure the potash gives depth of colour and richness of flavour to the fruit, and nitrogen vigour of growth to the tree, and size to the fruit. The basic slag thus makes good the deficiency of phosphates in farmyard manure.

Pruning is a simple matter, and consists in cutting back all the young lateral shoots to three or four eyes, the two lowest being, as a rule, close to the base, while the terminal shoot should be cut back to about one-third of its length, if there is room for it to extend so much. If it is left longer there will not be enough lateral shoots next year to furnish the new part of the cordon with spurs. This pruning, with the exception of that of the terminal shoot, which should be left till the latter part of the summer, should be done



VIEW IN RAVENSCOURT PARK. (See page 242.)

getting green Gooseberries at Whitsuntide, however early it comes, and however late the season, as they are generally big enough to permit of a preliminary thinning by the second week in May. The Gooseberry, however, is very accommodating, and it is especially so as a wall fruit, because it is the only fruit, except Morello Cherries and, perhaps, Red Currants, which really does well on a north wall. They are so fond of moisture that they will put up with shade for the sake of it, though even a north wall gets some sun in June and July.

Cordons may be planted as close as a foot apart, or even 9 inches. The ground should be previously well enriched with basic slag and farmyard or stable manure. Gooseberries resemble Black Currants in this respect, that there is no fear of their running to wood at the expense of fruit, for the stronger the wood the better the fruit. Basic slag has the effect of inducing short-jointed growth, so that on a

when the fruit is ready to change colour, as the removal of the superfluous growth sends an increased quantity of sap to the fruit, which will swell rapidly in consequence, while it will gain a better flavour as the result of the increase of sun and air to it, as well as to the maturer leaves, from which the fruit derives its flavour. There is not much fear of any of the buds breaking out in consequence of the shortening so early, but if any do, it can easily be remedied by cutting back the spurs affected to another bud. It is only in warm, wet weather that this is likely to happen.

If exceptionally fine fruit is wanted, it is advisable to carefully thin it when green—when it is large enough for culinary purposes—so as to leave not more than one fruit to a leaf or eye, and not more than two on a spur. In this way, with a little manure water if the weather is very dry, exhibition fruit may be obtained from non-

exhibition varieties. It does not seem to be generally known that ripe Gooseberries may be enjoyed from the middle of June to the middle of September by growing early sorts like Golden Drop, Early Green Hairy, and Wilmot's Early Red on a south-west wall, and late sorts like Ironmonger and Warrington Red on a north wall.

It is of no advantage to grow a number of varieties unless one is a specialist, and then it is a matter of interest rather than of profit. It is not as if the different sorts came at different seasons of the year, or were used for different purposes, like Apples and Pears. Of the green, yellow, and white varieties, considered as one section, Yellow Champagne is of fine flavour though small, while the White-smith, a large smooth green sort, combines large size and delicious flavour, and is a very prolific bearer, and one of the best for early picking in the spring. Keepsake is as large, and of as fine a flavour, and perhaps the earliest of all in getting large enough for the kitchen, but it is not so pretty on the dessert dish by reason of a dull yellowish bloom on the fruit. The old Golden Drop still holds its own, as does also the Early Green Hairy. In the red section, Whinham's Industry is very prolific and of large size, with a richness of flavour found in few other Gooseberries. The bush is, too, one of the most rapid growers. Some condemn it because it has too thick a skin for preserving purposes, but this does not detract from its excellence as a dessert fruit. Crown Bob and Warrington Red, both hairy, are of good flavour, and the former of large size. Red Champagne is delicious, and though small, very prolific. With Ironmonger, Lord Derby, and Lancashire Lad the list may fitly end. The old Rough Red is often recommended for preserving, but there is no need to grow a sort specially for that, when any hairy Gooseberry (is this a superstition about hairiness?), except perhaps the Industry, will do equally well. Crown Bob, Lancashire Lad, and Warrington Red meet the case excellently, and thus do for all purposes. All of the sorts mentioned above are good growers and free bearers, and most of them on the cordon system, with the help of judicious thinning, will produce as fine fruit as anyone need desire.

When Gooseberries have been in bearing a few years they are immensely benefited if an inch, or even 2 inches, of the soil around them is removed and good fresh soil put in its place. This has the further advantage of getting rid of the chrysalides of the Gooseberry saw-fly when one has almost given them up in despair.—A. PETTS.

Societies.

[By Telegraph.]

Edinburgh Flower Show.

Yesterday (Wednesday) and to-day, the 11th and 12th dates respectively, the great September fruit, flower, and vegetable show of the Royal Caledonian Horticultural Society was held in the Waverley Market. The weather recently has been favourable to the horticulturist, and from our short report it will be seen that the Scottish nurserymen and gardeners have been able to acquit themselves most creditably. We hope to furnish further details of the show next week; meanwhile we are able to supply a notice of the chief awards.

The show in the spacious Waverley Market was undoubtedly, in some respects, one of the most satisfactory lately held by the society. The plants were not numerous, but they were made up for by the fruit, hardy and hothouse alike, and by the cut flowers, which were generally very fine.

The fruit was, as usual at Edinburgh, the chief item. Mr. Smith, Oxenford Castle Gardens, Dalkeith, led first for a decorated table of fruit, he being the sole exhibitor. For a collection of ten dishes, Mr. Dawes, Ledbury Park, Hereford, secured first, his Grapes being good, with fine Peaches and grand Pears; Mr. Smith came second, and Mr. D. Kidd, Carberry Tower, Musselburgh, third. Mr. J. Day of Galloway House, Wigton, had the best twelve dishes of hardy fruits; and Mr. Beisant, from Castle Huntly, Longforgan, for twelve dishes of orchard-house fruits, took first with a grand lot.

Amongst cut flowers, Sweet Peas, Roses, and Dahlias divided the honours for beauty and quantity. Mr. Duncan, Fogo, Duns, had the best Sweet Peas, and Messrs. Campbell the best decorated table. In the classes devoted to nurserymen for the best arranged table of cut flowers, Messrs. Harkness & Sons, Bedale, Yorks, secured first with a bright lot, and Messrs. Cocker & Sons, Aberdeen, second. Gladiolus shown by Mr. Mair, Prestwick, and Messrs. Harkness were clean and good, the prizes being distributed in order of names. The collection of Dahlias brought a strong competition. Messrs. Kerr Bros., Dumfries, were first, with Mr. Gold, Wishaw, second; and Messrs. Campbell & Sons, High Blantyre, third. Mr. Gold secured first for eight bunches of Cactus varieties, and Mr. Smellie of Busby had the premier award for twenty-four Show blooms. In a class for three dozen Roses Mr. Hugh Dickson, Belfast, was first; Messrs. D. & W. Croll, Dundee, second; with Messrs. Alex. Dickson & Sons, Newtownards, third. All of these were fresh

and handsome blooms. Messrs. D. & W. Croll were first for eighteen blooms, and also for twenty-four Teas, all good. The class for twelve blooms of one sort was also keenly competed in.

In the vegetable section mention may be made of the collections of twelve sorts, where Mr. Waldie of Dollar was first with extra good produce. Single dishes were largely shown.

MISCELLANEOUS EXHIBITS.—Mr. J. Downie, Beechwood Nursery, Murrayfield, had a nice group of plants very effectively arranged on the floor of the building. Ferns and foliage plants, with Lilliums in liberal quantities, were the plants chiefly employed. In close proximity Messrs. T. Methven & Sons, Leith Walk, Edinburgh, had a group also on the floor, rather bold and striking in effect. Here also Messrs. Laird & Sons, Pinkhill Nursery, Murrayfield, had arranged a charming mass of foliage, cut flowers, and plants. These were very lightly disposed in rustic fashion.

Messrs. Cunningham, Fraser, & Co., Comely Bank Nursery, Edinburgh, showed Roses in pots and a charming lot of alpine and herbaceous plants, many of great interest. The exhibit of Messrs. Buchanan Bros., Kippen, took the form of fine black Grapes and Tomatoes. Mr. Eckford, of Wem, Shropshire, showed a nice lot of Sweet Peas, and also Verbenas. Messrs. Laing & Mather, Kelso-on-Tweed, staged shrubs, with Dahlias and Carnations. Their new Carnation Sir R. Waldie Griffiths received the award of a certificate. Mr. J. Forbes, Hawick, had an extensive exhibit of cut Carnations, Hollyhocks, and florists' flowers; as also had Messrs. Cocker & Sons, Aberdeen, along with good herbaceous plants.

Pentstemons were shown by Messrs. A. Lister & Sons, Rothesay, besides Tomatoes. Mr. C. Irvine, Jedburgh, also staged Pentstemons with fine Phloxes. Messrs. M. Campbell, High Blantyre, and Messrs. J. Grieve & Sons, Pilrig Nurseries, Edinburgh, were among the other contributors of miscellaneous produce.

The show was opened by the Earl of Rosebery, in the presence of a large concourse of people.

Royal Horticultural, Drill Hall, September 10th.

It was quite a surprise to find so magnificent an exhibition in the Drill Hall on Tuesday last, and not for many weeks has there been such a varied one, or one that has drawn so many people together. There was quite a buzz in the afternoon, when the largest number of visitors were forward. Messrs. Cannell & Sons sent up a specimen Apple of Warner's King which weighed 1½ lb., surely a record for weight and size. Collections of fruits, including one of seventy-five varieties of Pears and twenty-five varieties of Plums from the society's gardens at Chiswick, and others from Regent's Park, Crawley, Waltham Cross, Feltham, and South Norwood, were special features. Lord Garrard sent a creditable display of vegetables. Hardy plants and Dahlias also occupied a large share of the space. Orchids were represented by only a few plants.

Fruit and Vegetable Committee.

Messrs. J. Veitch & Sons, Ltd., staged a representative group of Tomatoes, all from the open ground, and as such we will furnish the names of all. They are—Trophy, Early Ruby, Acquisition, Large Red, Golden Jubilee, Green Gage, Chemin, Perfection, Peach, Cherry Red, Golden Queen, Cherry Yellow, King Humbert, Red Currant, The Polegate, Conference, Ham Green, Hackwood Park, Victoria, All the Year Round, Criterion, Up-to-Date, Mikado, Chiswick Peach, Acme, and Frogmore Selected. They also staged baskets of Plums, and the handsome Damson The Langley, as a fruited plant in a pot (silver Knightian medal).

Messrs. Wm. Paul & Son, Waltham Cross, Herts, staged magnificent Plum trees, bush-trained, in pots. These were clean, well-balanced, robust, and in most cases laden with fruits. Cherries, Pears, and Apples were also included. Amongst Plums were Jefferson's, Belle de Septembre, Grand Duke, Diamond, and Pond's Seedling. Roses were staged in baskets, and splendid dishes of Apples and Plums were on view (Hogg medal).

It was a most pleasing and satisfactory exhibit, that of seventy-two dishes of Pears and twenty-five dishes of Plums, that came from the society's gardens at Chiswick. The cleanliness, the smoothness, the good colour, and general evenness of all the varieties here included was gratifying, the more so because so much has been said to the contrary about Chiswick and its crops. Splendid dishes were shown of Pears Clement, Dr. Hogg, Beurré Superfin, Grégoire Bordillon, Emile d'Heyst, Doyenné Bonsoch, Beurré de l'Assomption (grand), Williams' Bon Chrétien, Clapp's Favourite (superb), Millot de Nancy, and a host of others. The Plums were equally fine. The superintendent is highly to be congratulated.

Mr. W. J. Godfrey, Exeter, Devon, exhibited a dish of Apple Venns' Pippin. Three dishes of Pears came from Mr. G. Bashford, Bagot Manor, Jersey, the varieties being Beurré d'Amanlis, Souvenir du Congrès, and Williams' Bon Chrétien, and received a cultural commendation. Sir Trevor Lawrence, Bart., sent Pears Clapp's Favourite and Souvenir du Congrès; and from the Earl of Jersey (gardener, Mr. J. Hawkes), Osterley Park, Isleworth, came grand Peaches and Pears. Lord Poltimore's gardener, Mr. T. A. Slade, sent a most magnificent dish of Apples of the variety Lady Sudeley. A number of fruiting sprays.

of *Rubus fruticosus* came from Lord Malcolm (Mr. D. S. Melville), Pultallock, Lochgilphead, N.B.

A handsome collection of vegetables was shown from Lord Gerrard, Ashford, Kent, and received a silver Banksian medal. Some fine Onions, Carrots, Jubilee Runner Beans, Dwarf Mammoth Peas, Chilies, Potatoes, Tomatoes, Extra Early Cauliflower, and Cucumbers were shown; Beet, Celery, and Marrows were also included. Mr. E. Neal, gardener to Mrs. Nix, Tilgate, Crawley, contributed a collection of fruits in considerable variety. There were Grapes Black Alicante, Muscat of Alexandria, Appley Towers, and Gros Colman; Melons Triumph, Ne Plus Ultra, Hero of Lockinge, and Sutton's Perfection; Peaches Goshawk, Barrington, and Dymond; Plums Jefferson, Guthrie's Late, Reine Claude de Bavay, Kirk's, Green Gage, Late Transparent, Diamond, Victoria, and Purple; there were also several Apples and Pears, with Red Currants, and Morello Cherries (silver-gilt Knightian medal).

Mr. G. Kelf, gardener to Miss Adamson, South Villa, Regent's Park, sent a splendid table of fruit, including excellently finished Grapes, Pears, Peaches, Plums, and some handsome Melons (silver Knightian medal). Messrs. J. Peed & Son, West Norwood, were represented by a collection of Apples and Pears, with a few Plums. The best Apples were Lord Suffield, Loddington Seedling, Gascoyne's Scarlet, Tyler's Kernel, Potts' Seedling, King of the Pippins, New Hawthornden, Lord Grosvenor, Queen, Emperor Alexander, Mother, Ringer, Warner's King, and Ribston Pippin, superb; the Pears and Plums were of equal merit (silver Knightian medal).

Floral Committee.

From Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., came a wonderful display of perennial herbaceous Asters, grown and staged in pots. Some 300 square feet of surface was covered in the centre of the hall, the group representing about seventy-five plants altogether. Some of these were nearly 6 feet high, others being quite dwarf, but all were well covered with bloom. To name the most distinctive we must include *A. Novæ-Angliæ Præcocië*, *N.-A. Mrs. J. F. Rayner*, *N. B. Patula*, *A. acris linearifolius*, *A. lævis Arcturus*, *A. a. Apollon*, *A. Boltonia incisa*, and others of the *Novi-Belgi* section. The group created a very great deal of interest, and being relieved by *Eulalias*, *Juniperus bermudianus*, and *Celosias* between the Asters, the effect was pleasing and good. Asters grown thus in pots are beginning to be fashionable.

J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford, staged a very large collection of beautiful Selaginellas, and received a gold medal.

Cactus Dahlias were very strongly shown, and included splendid collections from Mr. James Stredwick, Silverhill Park, St. Leonard's-on-Sea, who had awards for six varieties. Another group was set up by Mr. R. C. Notcutt, Broughton Nursery, Ipswich, who also had a few good novelties. Messrs. J. Cheal & Sons, Crawley, and Messrs. Cannell and Sons, Swanley, were each exhibitors in this direction. The latter received a gold medal.

The hardy plantmen were also in great evidence with splendid autumnal collections of Gladioli, Asters, Phloxes, Rudbeckias, Kniphofias, and Scabiosas. In this section were Messrs. Barr and Sons (silver Banksian), Messrs. T. S. Ware, Ltd. (S.F.), Mr. M. Pritchard (S.B. medal), and Mr. Amos Perry, who also obtained a silver Banksian medal. The only group of stove and greenhouse foliage plants was staged by Mr. John Russell, Richmond (silver Flora), and a fine group of exotic Ferns was sent from Messrs. J. Hill & Son of Lower Edmonton (silver Flora medal). Roses from Messrs. W. Paul & Son received a silver Banksian.

The Chrysanthemum season has opened in conjunction with the exit of summer, and here, on this occasion, Messrs. J. Laing & Sons staged a fine group in pots, together with some cut H.P. Roses (silver Banksian medal). Messrs. W. Wells & Co., Ltd., Redhill, Surrey, had a grouplet of new Chrysanthemums, and received two awards of merit. One of these was Orange Masseë, a very beautiful flower indeed; and Goacher's Crimson, also very rich and fine. Mabel Goacher, a large single white, was also included. A beautiful group of *Dracæna Offeri* was staged by J. Warren, Esq. (gardener, Mr. A. Offer), Handcross Park, Crawley.

Certificates and Awards of Merit.

Canna Reichsauszler Fürst Hohenlohe (W. Bain).—A dwarf variety with brilliant yellow flowers of large size (award of merit).

Carnation (Tree) E. Crocker (H. J. Jones).—One of the finest tree Carnations we have seen; it strongly resembles Mrs. T. W. Lawson, but is deeper coloured and better scented; robust, on long stalks, and non-splitting calyx (award of merit).

Cattleya Germania (Charlesworth & Co.).—This is a hybrid from *C. Schofieldiana* and *C. Hardyana*. The sepals and petals are pale purple rose, with deeper venations. The fimbriated lip is crimson suffused with purple (award of merit).

Cattleya Hardyana Rochfordiana (T. Rochford).—A superb form, the sepals are cream and the petals almost pure white. The magnificent lip is crimson purple with golden lines in the throat (first-class certificate).

Dahlia Mrs. H. J. Jones (J. T. West).—A very showy Cactus variety; the florets are bright red with white tips (award of merit).

Dahlia Spotless Queen (J. T. West).—A beautiful Cactus variety; it is almost pure white (award of merit).

Dahlia Merlin (C. Turner).—A Show variety of fine form; the colour is bright brick red (award of merit).

Helianthus mollis (Wallace & Co.).—A handsome single Sunflower; the colour is bright yellow (award of merit).

Kochia scoparia (H. Cannell & Sons).—A graceful growing annual that should become very popular. It is commonly named Summer Cypress (first-class certificate).

Nymphaea devoniensis (W. Bain).—A grand Water Lily; the colour is soft pink, and the flower is of very large size (first-class certificate).

Phragmites communis foliis variegatis (Barr & Sons).—A very handsome Grass, growing about 6 feet high. The colours are bright green and cream (award of merit).

Rose Madame Berkeley (Paul & Son).—A finely formed Tea Rose; the colour is cream, with a delicate suffusion of pink. It is deliciously fragrant (award of merit).

Rose (Tea) Salmonia (Wm. Paul & Son).—Dwarf, free flowering, robust, with flowers of a brilliant, warm, rosy-red colour, shaded orange-salmon in the centre; a good bedding Tea (award of merit).

Sophro-Lælia Gratiosa (Charlesworth & Co.).—A bigeneric hybrid between *Lælia tenebrosa* Charlesworthi and *Sophranitis grandiflora*; the colour of the flower dull crimson (award of merit).

National Dahlia, September 6th and 7th.

The annual exhibition by the above society was held on Friday and Saturday last week at the Crystal Palace, Sydenham, and in all essential points the show was thoroughly successful. Both days were delightful, and brought forward a large number of visitors.

Nurserymen.

SHOWS AND FANCIES, INTERMIXED.—The first four classes were divided into two divisions, A and B, class 1 being for sixty distinct blooms, as above. Four collections were set up, and here Mr. S. Mortimer added another feather to his cap by winning the first prize. He has been seen in A1 style at the earlier shows. Here his set was furnished as follows:—John Hickling, Nubian, Florence Tranter, Rev. J. Goodday, Victor, J. T. West, Imperial, John Walker, Shotesham Hero, Arthur Rawlings, Mabel Stanton, and Glowworm. In the second dozen were Mrs. Mortimer, Eldorado, Henry Bond, Burgundy, Willie Garrett, Duchess of York, Duchess of Fife, Mrs. D. Saunders, Rosamond, Reporter, Matthew Campbell, and Warrior. Then, in the third, were Goldfinder, Peacock, Lord Salisbury, Jas. Cocker, Jas. Vick, Jos. B. Service, Chieftain, Mrs. Foster, John Standish, Leak, Mrs. J. Harris, and Maud Fellowes. Fourth dozen, Henry Walton, Shirley Hibberd, Criterion, Spitfire, W. H. Williams, S. J. Saltmarsh, Rebecca (self), Penelope, Geo. Dixon, Mrs. W. Slack, F. Goodwin, and Frank Pearce. Lastly, R. T. Rawlings, S. Mortimer (self), Virginal, Mrs. Rawlings, Queen of Belgians, Harry Turner, Goldsmith, Peacock (self), J. C. Vaughan, Crimson Globe, Reliance, and Sidney Humphreys. The foregoing were undoubtedly a fine set, and on the whole very refined and even. The second award fell to Messrs. Keynes, Williams & Co., Salisbury, whose blooms were good, and promised to be better in a day or two. Mr. J. Walker, Thame, fell heir to the third prize.

In the succeeding class for four dozen of the same, Mr. S. Mortimer again held the coveted first place with blooms considerably less in size than in the class for sixty. Messrs. Keynes, Williams, & Co. were second, and Mr. J. Walker third, as before. There were five entries. The two foregoing classes comprised division A. Class 3 opened division B, and stipulated thirty-six blooms, distinct. Mr. W. Treseder, Cardiff, beat Mr. G. Humphries of Kingston Langley, Chippenham, and third place was accorded to Messrs. Gray & Sons of Frome; so here the Western growers had the ruling all to themselves. In each case the most creditable specimens were staged. Again, in the fourth class for two dozen blooms, distinct, the west countrymen came forward in strength and took all awards, Messrs. Gray & Sons, Ltd., followed for second by Mr. G. Humphries, and for third prize by Mr. W. Treseder of Cardiff. The finest blooms as regards colour, form, and general finish from amongst the latter entries were Mrs. Gladstone, Mrs. Saunders, H. Wallace, Mrs. Slack, Mrs. Langtry (excellent), and Warrior.

Class 5 opened the third division (C), and here the prizes were distributed in order thus:—First, Mr. J. R. Tranter, Henley-on-Thames; second, Messrs. J. Cheal & Sons; third, Messrs. R. Proctor & Sons, Chesterfield. There were only three entrants, but their exhibits required a great deal of careful pointing, not from their great excellence, but because of their unevenness.

CACTUS DAHLIAS.—The general impression of the Cactus varieties was not favourable. We have seen them much better developed, though perhaps the evolutions of the newer forms produced within the last few years may have been such as to leave them less imposing in the eyes of ordinary growers and judges. They were a very fine feature of the show all the same, in fact the finest from most points of view. We cannot allow ourselves to expand beyond very restricted limits, and under these orders the best set of eighteen varieties, in bunches of six blooms each, are furnished completely for the use of those readers who may wish a competitive selection. Messrs. J. Burrell & Co., Cambridge, then, stood first for eighteen sorts, and their varieties were Emperor, Mrs. J. J. Crowe, Colada, Artus, J. W. Wilkinson, Britannia, Rosine, J. W. Fife, Lord Roberts, Elsie, Mrs. Edward Mawley, Gilliard, Rosy

Morn, Loftie Dean, Uncle Tom, Vesta, Verdant, and Lyric. Messrs. J. Stredwick & Sons were exceedingly close as second, and indeed the first prizewinners were very much surprised at finding themselves so much honoured. The better varieties in Stredwick's stand were Mrs. Winstanley, W. F. Balding, Khaki, Edith Mayward, P. W. Tullock, and Richard Dean. The latter is a variety worthy to bear so highly valued a name. Messrs. J. Cheal & Sons were third with a fine set. Four entered. Mr. S. Mortimer, Mr. J. Walker, and Mr. M. Seale were placed in this order for a dozen varieties, six blooms of each. The judges of classes 9 and 10 were so terribly slow that we had to omit reporting them, in order to allow ourselves time for the remaining sections.

The classes devoted to specimen blooms set in stands and arranged with Dahlia foliage made a fearful and most unpleasant contrast to the beautiful arrays of the same varieties in bunches. Still, the specialists have their ideals. Four large exhibits were staged in class 8, for forty-eight blooms, distinct, and here Messrs. J. Stredwick & Son led off with a lot of splendid blooms neatly arranged. Cæsar, Eric Darkie, Wm. Jowett, Alpha, and Vesta were specially meritorious. Messrs. J. Burrell & Co. were second, but had been very sparing in their attentions so far as "setting-off" with foliage was concerned. Messrs. Keynes, Williams & Co. third.

POMPON DAHLIAS.—Mr. M. V. Seale of Sevenoaks is well known amongst exhibitors of pompon Dahlias, and his success this year was shown by his capturing the first prize in class 11, for the two dozen varieties, in bunches of ten blooms each. Being the premier collection in this section, we furnish the complete list of varieties, which were:—The Duke, Buttercup, Douglas, Donovan, Bacchus, Emily Hopper, Lilian, Little Sweetheart, Elsie Grahame, Madeline, Ernest Harper, Snowflake, Capt. Boyton, Phoebe, Crimson Gem, Doris, Tommy Keith, Jessica, Nerissa, Demon, Nellie Broomhead, Eurydice, and Ganymede. Messrs. J. Cheal and Sons, Crawley, formed a close second, though here their selection of varieties was hardly so happy as was Mr. Seale's. They staged good bunches of Madeline, Tommy Keith, and Crusoe. The third prize fell to Mr. Chas. Turner, Slough. For twelve varieties in bunches, the same size as in the preceding class, seven entrants contested, and ultimately the prize was awarded to Messrs. J. Burrell and Co. of Cambridge. The firm of Messrs. J. Stredwick & Sons, St. Leonards, followed second, and third prize was annexed by Messrs. Craig & Sons, Frome. All collections were even, and no one could find fault with any of them.

SINGLE DAHLIAS.—Here Messrs. J. Cheal & Sons appear to be unassailable, at least they always manage to lead off with the highest honour where single Dahlias are concerned. Their set of twenty-four varieties, ten blooms each, was most imposing when seen, neatly and carefully arranged in this competition. Here they had Donna Casilda, Flame, The Bride, Duke of York, Rosebank Cardinal, Alba Perfection, Amos Perry, Duchess of Fife, Leslie Seale, Miss Roberts*, Miss Morland, Puck*, Mrs. Connink*, Tommy, Formosa, Hilda, Anora, Beauty's Eye, Polly Eccles, Marcus, Columbine*, Naomi Tighe, Madge, and Girlie*. Those marked with an (*) were, according to our ideal, the handsomest and most beautiful. Mr. M. Seale was a long way behind as second; only two entered. Mr. E. F. Such, Maidenhead, had a nicely arranged collection of a dozen varieties in the succeeding class, and beat Mr. G. Humphries of Chippenham, who came second here. Messrs. Gray & Sons were third.

Amateurs.

SHOWS AND FANCIES, INTERMIXED.—The sum of 50s. was secured for twenty-four of the above, distinct, by Mr. E. Jefferies, Chippenham, whose blooms were a trifle uneven, but superior in most points. Second place was awarded to Mr. T. Hobbs, Bristol, and third to Mr. W. Mist, Ightham, out of five entries. The order followed for eighteen blooms was, first, Mr. S. Cooper, Chippenham; second, Mr. E. West, jun., Henley-on-Thames; and third, Mr. A. Parks, Sevenoaks, all fair.

SHOW DAHLIAS ONLY.—For a dozen the premier award was annexed by Mr. A. Robinson, Wellingborough, and consisted of Mrs. Gladstone, Mrs. Glasscock, J. Walker, Duke of Fife, W. Powell, Dr. Keynes, Maud Fellowes, Victor, F. J. Saltmarsh, S. Humphreys, R. T. Bawlings, and J. T. West. These were a highly creditable set, and we have pleasure in giving the names of the twelve varieties. Mr. R. Burgin, St. Neots, came second. Five entered. For six blooms, Mr. A. Parker, Sevenoaks, was winner.

FANCIES.—Mr. T. Hobbs of Bristol led for a dozen of these, having Buffalo Bill, Gaiety, Prince Henry, Watchman, Mrs. Downie, Dazzler, Rev. J. B. M. Camm, Hercules, Sunset, Frank Pearce, John Cooper, and Chorister. Mr. T. Anstiss, Brill, followed second; and third, Mr. W. Peters, Baldston, near St. Leonards. Mr. E. Jefferies led for the half dozen Fancies, and here seven entrants contested.

CACTUS VARIETIES.—The display made by Mr. F. W. Sharp of Twyford, Berks, was most conspicuous, and certainly very creditable. He stood first for the twelve varieties in the amateurs' section, staging, amongst others, some noble bunches of Viscountess Sherbrook, Lord

Roberts, Mary Service, Zephyr, Gilliard, and Jealousy. Mr. Peters came second, and Mr. W. Mist third. In class 22, Mr. H. L. Brousson, jun., of Sidcup held sway, and his blooms of Chas. Woodbridge, Loyalty, Rosine, Uncle Tom, Mrs. J. J. Crowe, &c., were in splendid condition. There were eight entries, the second prize being taken by Mr. P. W. Tullock of Hove. Mr. E. Mawley led for the six bunches.

In classes 21 and 23 the prizes were furnished by Messrs. Keynes, Williams, & Co., and in class 22 by Mr. J. Stredwick. No first prize seemed to be awarded in class 24, for the eighteen blooms, distinct; but the second prize was secured by Mr. J. Bryant of Salisbury with a fine lot; and third, Mr. L. McKenna, Twyford. Mr. H. L. Brousson, jun., won for twelve ditto. In the three latter classes Messrs. J. Cheal & Sons and Mr. S. Mortimer offered the prizes.

POMPONS.—Mr. H. J. Stenning, Tunbridge Wells, led for twelve varieties in bunches of six each, but the colour was not fully developed in the blooms. Mr. J. Hudson, Acton, W., came second, and third Mr. W. Mist. For the six varieties Mr. W. Peters of Baldston was again to the fore.

SINGLES.—The classes here made but a poor show, and a considerable amount of tabling was left quite unfilled. Mr. C. Osman of Sutton won the silver medal for six varieties, ten blooms of each, and it is but just to add that these were as fine as the best in the show. They were Duke of York, Victory, Mauve Queen Improved, Rosebank Cardinal, Mrs. E. Harvey, and Canterbury Tales.

VASE DECORATION.—Mr. J. F. Hudson won the first prize for a vase of Dahlia blooms arranged for effect, having a buff-bronzy variety and foliage of *Acer palmatifidum purpureum*, also *Asparagus fronds*. Mr.

E. Mawley came second with a much richer though heavier vase. Seven entered. Class 33 called for three vases of Cactus varieties, six blooms in each vase. Mr. R. Edwards, Sevenoaks, won, he having a very similar colour assortment to those that took off the honours in the preceding class. Mr. H. A. Needs, Horsell, was second with a rich and delightful set of orange-scarlet, black, and yellow blooms, each colour separate. Mr. E. Mawley came third, but evidently he was not at the arranging of such a poorly filled three as were displayed from his address. Mr. H. A. Needs, Horsell, had the best basket of blooms, the others being miserable, and even atrocious exhibits, to grace a show of the National Dahlia Society. See to it, men!

Mr. A. Parkes of Sevenoaks was first in the class for six Fancies, open only to those who had never previously won a prize at an N.D.S. show; Mr. R. Stewart held a like place for six Cactus varieties.

Open Classes.

The open classes did not entice very many enthusiasts, though some very fine blooms were on view. The two exhibits of twelve varieties, in bunches of ten blooms each, of Fancy single Dahlias, were especially fine. Messrs. J. Cheal & Sons led again in this case, and their collection included Irene Daisy, Peacock, Meta, Shamrock, Princess Beatrice,



PIPTANTHUS NEPALENSIS. (See page 245.)

Paragon, Northern Star, Miss Girdlestone, Victoria, Bessie, and Veronica, all of the first water. Mr. M. Seale of Sevenoaks followed second. For a shower bouquet five entries were made, and here Mr. W. Treseder had the finest, consisting of yellow blooms with Croton leaves, Asparagus plumosus, and golden Honeysuckle. Messrs. R. Proctor & Sons were placed second with a very pleasing and tasty bouquet in mauve, with ribbon coloured identically with the blooms. The class for Cactus Dahlias in pots was again a failure, for none entered.

Coming now to the classes set aside for special colours, we must summarise these, as the foregoing winners were the prizemen here as in the preceding classes. The best dark Dahlia blooms were those of the variety Viotor; Mrs. Gladstone was the premier light var., R. T. Rawlings the best yellow, Arthur Rawlings the finest red, John Walker the best white, and for "any other colour" Duchess of York was chosen. As a tipped Fancy Mrs. Saunders stood foremost; striped Fancy, Frank Pearce; edged Show, J. T. West.

SEEDLINGS.—Certificates were awarded for three or more blooms of any new seedling Dahlia. Only first-class novelties could receive recognition, yet there were many of these "first-class novelties," as our following lines show. A bronze medal was awarded by T. Hobbs, Esq., to the best seedling Show.

The following Cactus varieties received certificates:—

Miss Winchester (J. T. West).—A salmon pink variety of fair size.

Mrs. H. J. Jones (H. J. Jones).—After the style of Innovation, very strong.

Mrs. A. F. Parkins (J. Cheal & Sons).—A soft-coloured creamy yellow, tipped and shaded with ivory white; petals spidery.

Mrs. de Luca (J. Cheal & Sons).—Black stems, yellow centre to the blooms, bronzy outermost.

Mrs. Freeman Thomas (Stredwick).—A large yellow variety, suffused bronze.

Mrs. Winstanley (Stredwick).—Deep crimson, with a flash of orange.

T. W. Tallock (Stredwick).—Peculiar mauve, red, and bronzy combination.

Alpha (Stredwick).—A bright Fancy-Cactus variety, chrome ground, heavily spotted and flaked with bright maroon.

Mrs. E. Mawley (Burrell & Co.).—Large, clear, soft canary yellow.

Mrs. H. A. Needs (Baxter).—A large and handsome variety, rich ruby crimson shaded purple.

J. H. Jackson (J. H. Jackson).—An enormous sized bloom, unexcelled in this respect. Colour deep, rich, blood-red crimson, with a rich velvety sheen.

R. Needham (Treseder).—A radiate, acute petalled sort, deep glowing crimson.

Other varieties in their sections were:—

Show Dahlia C. Turner (C. Turner).—A neat medium sized bloom, of a strikingly bright scarlet colour. A very fine sort.

Pompon Mrs. Harris (M. Seale).—Neat, with a yellow centre and sandy-buff edge.

Single Fancy Cronje (W. Parrett, Sevenoaks).—Mauve-lilac, flaked deep purple; not distinctive.

Single Fancy De Wet (W. Parrett).—Orange-scarlet, tipped white, and yellow disc; a "taking" variety.

Fancy Dahlia Mariner (St. Pierre Harris).—A deep maroon, flaked with a lighter shade of the same colour; distinctive.

Fancy Single Dahlia Beauty of Sevenoaks (M. Seale).—A bright and beautiful flower, buff ground, flaked crimson and orange.

Pompon Crusoe (J. Cheal & Sons).—After the style of Nerissa, but very much deeper toned.

Pompon Dinah (J. T. West).—A thoroughly distinctive lavender, or lilac-mauve sort.

Pompon Florizel (Charles Turner).—Bright, dazzling, clear yellow.

Miscellaneous Exhibits.

Messrs. Thos. S. Ware, Ltd., Hale Farm Nurseries, Feltham, have not been quite so much in evidence at exhibitions in London during the last month or two, but at this exhibition their collection was both varied and of high quality. Amongst their Liliums were some splendid specimens of speciosum; Asolepias tuberosa, Milla bifolia, various Phloxes and Gladioli, Gaillardias, Asters, Tritonias, and the beautiful new Polygonum, specifically named Baldsohuanicum, were all in evidence.

"Hobbies," Ltd. (Mr. J. Green), staged extensively with their usual care and skill. The newest and most superb varieties of the Cactus and pompon sections were all on view. Chief amongst the Cactus sorts were Miss Grace Cook, a lovely rosy lavender sort with pale creamy centre; Prince of Yellows, very bright; Floradora, deep rich claret crimson, very handsome; Purity, one of the best whites; Honeysuckle, a peculiar buff and red variety; Artus, J. W. Wilkinson, &c., were all in Al form; Lyric was especially fine.

The magnificent collection from Messrs. H. Cannell & Sons, Swanley, created great interest. The most striking blooms were those of Vesta, Mrs. Saunders, Wm. Jowett, Wm. Treseder, Gilliard, Mr. J. H. Luscombe, The Clown, still good; and Les Allies, all of which are in the very forefront at the present time.

Messrs. Barr & Sons, King Street, Covent Garden, W.C., staged hardy flowers, including Water Lilies, Villarsia nymphaeoides, Vallotas, Glyceria aquatica variegata, Romneya Coulteri, Tritonias, Kniphofias, Liliums, &c.

Mr. J. T. West, Tower Hill, Brentwood, staged a large number of little known yet meritorious Cactus Dahlias, which he would do well to advertise; they are all worthy of being pushed.

From Messrs. J. Peed & Son, West Norwood, London, S.E., came an assortment of tuberous Begonia flowers, picked from the open ground. These were large and fine, and greatly admired. The same firm had a large exhibit of hardy flowers and Apples. Very fine were the dishes of Tyler's Kernel, Yorkshire Beauty, Duchess of Oldenburg, Cellini Pippin. Yorkshire Beauty was also well shown, and a fine dish of Triomphe de Vienne Pear.

Mr. Erio F. Snob, The Royal Berkshire Nursery, Maidenhead, staged hardy out flowers, as did Messrs. J. Laing & Sons from Forest Hill. The latter had some splendidly fruited pot Vines, besides a collection of Apples and groups of Begonias, Caladinms, Streptocarpus, &c. Especially fine was their exhibit of the bedding Begonia named Bavaria, of a beautiful bright rose crimson colour. They had also Chrysanthemums in pots, full of bloom, and out Roses on stands.

Great Fruit and Vegetable Show at Glasgow.

This, the second show in the grounds of the International Exhibition under the joint auspices of its Directors and of the Glasgow and West of Scotland Horticultural Society, was held on the 4th and 5th inst., in three of the large marquees which did duty at the flower show a week previous. Weather, as on the latter occasion, was all that could be desired, and though several entrants failed to forward their contributions, thus causing blanks in some of the tables, the exhibition of fruit, particularly Grapes and Apples, and of vegetables, has never been excelled in the "Second City."

Everything worked harmoniously, the tents being cleared for the judges in good time, so that their work was undertaken without fluster or hurry. During the afternoon a large gathering of horticulturists from all parts of the country partook of luncheon at the invitation of the directors of the International Exhibition, Bailie Simons, chairman of the Amusements Committee, presiding. Among others present were Messrs. Bunyard, Maidstone; Grant, Reading; Gordon, Hooper Pearson, Wright, and Thomas, London; Hunter, Lambton; Molndoe, Hutton Hall; Whitton, City Parks; Todd, Edinburgh; Buchanan, Kippen; Cuthbertson (Dobbie & Co.), Rothesay; Whytock, Dalkeith; Fender, Coltoquhey; and many more well known gardening men. The exhibits were arranged so that one of the tents was occupied exclusively with fruit, another with vegetables, and a third with exhibits not for competition.

While it may safely be said that men of the spade had brought together one of the grandest exhibitions of cultural skill as applied to vegetable production ever seen in Glasgow, there is no doubt that the centre of attraction to the great majority lay in the fruit tent, where one's interest was divided between the

Collections of Fruit,

arranged to cover a space of 72 square feet, and the grand display of Grapes in the classes devoted to that fruit. The collection just referred to, like all the fruit classes, was open, and in this case the fruit was not necessarily to be the product of the exhibitor. The result was that some grand fruit was collected by the six competitors who staged for the prizes—£20, £10, and £5. The arrangement in each case was admirable, and the general effect of the whole exhibits very good indeed. There was no doubt whatever as to which the £20 would be awarded, that of Malcom Campbell, Ltd., 18, Gordon Street, Glasgow, being superior in every respect to any of the others. All the fruit employed was of the highest class; some forty bunches of perfectly finished black Grapes were employed, the greater number of which were hung on a board draped with pea green silk, which formed an admirable backing to the rest of the exhibit. Others were displayed on exhibition boards, and yet others depended from ornamental brass centrepieces, each of which held a fine Pine Apple. Only a few white Grapes were used, but of Pine-apples quite a dozen, with as many Melons. The dishes of Pears were very fine, and embraced ripened fruits of Doyenné du Comice, Marguerite Marillat, and Pitmaston Duchess. Of Peaches mention must be made of the dishes of Alexandra Noblesse and Princess of Wales. There were also several dishes of good Apples, of Nectarines, of Plums, and of Figs.

The second prize was worthily awarded to Mr. J. McIndoe, Hutton Hall, Guisborough. Here a few trails of Lyopodium comprised the decoration, which was at once simple and chaste in effect. The Grapes were not only less in number of bunches, but they were also inferior all over, against the preceding lot, a cluster of Messrs. Buchanan Bros.' New Empress of India, being the best shown. The other fruits embraced two good Smooth Cayenne Pine-apples, Melons, several dishes of Peaches, notable among which were Golden Eagle and Princess of Wales; well coloured Nectarines, very good Doyenné du Comice and Pitmaston Duchess Pears; fine Washington, Allington Pippin, and Bietzheimer Apples, with Plums in variety, Cherries, Gooseberries, and a dish of Citrons. The third prize was secured by Mr. T. Carlyle, 687, New City Road, Glasgow, with a very nice lot of fruit, but distinctly less good than in the above mentioned. It may be noted here that the first prize fruit was sent, when the exhibition closed, to the Great Western Infirmary, for use of the patients.

The next class was for a collection of fruit, twelve dishes, not more

than two varieties of one sort, £10, £6, and £4 being the prizes offered. Here there were only three entries, the first card being placed on the fruit set up by Mr. Dawes, gardener to M. Riddolph, Esq., Ledbury Park, Ledbury. The Grapes comprised grand Gros Maroc and a somewhat green Muscat of Alexandria; fine Countess and Ne Plus Ultra Melons, grand Pitmaston Duchess Pears, fine Barrington and Sea Eagle Peaches, good Humboldt and Stanwick Elruge Nectarines, Belle de Louvaine Plums, Brunswick Figs, and good Worcester Pearmain Apples. The second prize was secured by Mr. Kirk, gardener to J. Thomson Paton, Esq., Norwood Park, Alloa, with most commendable fruit, the Black Hamburg Grapes being a somewhat weak feature. Mr. Murray, gardener to the Marquis of Ailsa, Culzean Castle, Ayr, third. For a collection of eight dishes of fruit, same conditions as in that just noted, only two staged, Mr. R. Grindrod, gardener to G. J. Bates, Esq., Whitfield, Hereford, being easily first. The Grapes were fine examples of Gros Maroc and Alnwick Seedling, with Melons, a Pine-apple, good Pears, Peaches, and Nectarines. Mr. Kidd, gardener to Lord Elphinstone, Carberry Towers, second; Appley Towers Grape was very good in this lot. Mr. Richard Booker, gardener to the Duke of Richmond, Goodwood, secured the first prize of twelve dishes of hardy fruits.

Grapes.

The most keenly contested class of those devoted to Grapes was that for eight bunches, not more than two bunches of one variety. Five competitors staged, the first prize being placed on the exhibit of Mr. T. Lunt, gardener to Captain Stirling, Keir House, Dunblane, who showed perfectly finished examples, averaging fully 3 lbs. each. The sorts were Madresfield Court, very fine indeed; Black Hamburg, fair Muscat of Alexandria, and grand Alnwick Seedling. The only drawback in these fine Grapes was in the size of the berries, which were smaller than we are accustomed to see from Keir. The veteran Mr. Kirk was a good second with Madresfield Court, Gros Maroc, Alnwick Seedling, and Duke of Buccleuch; third Mr. Leslie, Pitcullen, with grand, but less well finished examples. Only two staged in the four-bunch class, Mr. Kidd being first with Appley Towers and Madresfield Court as his best; second Messrs. Murray & Sons, Polmont.

For two bunches Muscat of Alexandria Mr. Lunt secured first with medium sized clusters, perfectly ripened; second Mr. White, gardener to D. Mitchell, Esq., The Castle, Largs; third Mr. Kidd. For two bunches Black Hamburg there were twenty entries, some very good, and also some rather inferior examples being staged. Mr. Lunt was once again first; Mr. Menzies, gardener to J. A. Harvey-Brown, Esq., Dunipace, Larbert, second; and Mr. D. Buchanan, gardener to Colonel North-Dalrymple Hamilton, Burgany, Dally, third. In a very good class Messrs. D. & W. Buchanan, Forth Vineyard, Kippen, was first for two bunches Alicante, Mr. Lunt second, and Messrs. Murray & Son third. Only two staged Gros Colman, Mr. Leslie, gardener to Mrs. Coats, Pitcullen, Perth, being first with very good examples, and Mr. White second.

For two bunches of Mrs. Pince, Mr. Lunt was again first, staging perfectly finished clusters, but with berries somewhat light; second, Mr. James Day, gardener to the Earl of Galloway, Galloway House, Garlieston; and third, Messrs. Buchanan. The class for Lady Downe's was far above the average, some ten staging; and Messrs. Lunt, Kidd, and White secured the prizes in the position of their names. Messrs. Lunt and Day only showed Madresfield Court, both showing well, first and second prizes being placed in this order.

For two bunches any other black Grape, fourteen staged, Mr. Lunt securing first with grand clusters of Alnwick Seedling; Messrs. Buchanan second with Cooper's Black; and Mr. J. Waldie, gardener to W. Dobbie, Esq., Dollar-beg, Dollar, third with Gros Maroc. For two bunches any other white variety Mr. Leslie was first with good Duke of Buccleuch, and Mr. Young second with Foster's Seedling. The best Melon was a small fruit of Best of All from Mr. Christie, gardener to D. Scott Ferguson, Esq., Thayston.

Peaches, Pears, Apples.

Peaches contained some very good as well as some rather inferior dishes. For twelve fruits the first prize was awarded to Mr. Blair, gardener to J. A. Campbell, Esq., Craigie House, Ayr, Princess of Wales being very fine; Mr. Parker, Goodwood, second with same and Crawford's Early. For six Peaches Mr. Grindrod was first with fine Sea Eagle; second, Mr. Pope, gardener to Earl of Carnarvon, Highclere, with Alexandra Noblesse. For twelve Nectarines Mr. Lunt was first.

Pears were, as a fruit, much better than usually seen in Scotland, being individually large and clean grown. For a collection of twelve distinct varieties, four of each, Mr. J. Gordon, gardener to W. Neilson, Esq., Ewerfield, Ayr, was clearly first, the several kinds being of good size, even, and better ripened than any in the other collections; Mr. Grindrod was second, and Mr. McIndoe third. For six varieties grown under glass, Mr. Gordon was again first, Magnate, Louise Bonne of Jersey, and Durondeau being particularly fine. For three dishes of Pears, Mr. R. Greenlaw, gardener to H. J. Yonnger, Esq., Benmore, was first with large but very green fruits. The Apples, like the Pears, were above the average in size and quality, much of the Scottish fruit being almost equal to that from England. The collection of twelve distinct varieties brought out some very fine examples of good culture, Mr. Grindrod being first with well coloured fruits, Lady Sudeley, The Queen,

Peasgood's Nonesuch, and Duchess of Oldenburg in especial being really fine; second, Mr. Gibson, gardener to Mrs. Johnstone, Coombe Cottage, Kingston-on-Thames, with larger but less well-finished examples; third, Mr. Dawes, and fourth, Mr. R. Parker.

In the collection of kitchen Apples, twelve varieties, four of each, the fruit was even more imposing than in the last class, Mr. R. Parker securing first prize with really grand examples, including Twenty Ounce, Grenadier, Royal Jubilee, Bietzheimer, Striped Beaufin, Stirling Castle, Warner's King, Peasgood's Nonesuch, Lord Derby, Emperor Alexander, Ecklinville Seedling, and Gloria Mundi. Mr. J. Kelly, gardener to Messrs. Campbell & Getting, Glewstone, was a close second with better ripened but less heavy examples; third, Mr. Grindrod, also with a fine lot. For six varieties dessert Apples Mr. Kelly was first with fair fruit; second, Mr. Murray, Culzean Castle, and third, Mr. Dawes.

Vegetables.

In the vegetable tent it is safe to say that a more meritorious lot has never previously been brought together, a remarkable phase in this section being the high position taken by Scottish growers. Really first-class exhibits were left out of the prize list, but as they are a cautious people at Glasgow, and in some things not much beyond the period when the sapient Andrew Fairservice forced "Lung Kale" and Nettle Tops at Drapdailly, and so continue to place numbers only, to all exhibits, the successful only being named, it was impossible to discover from whom the exhibits were forwarded. No fewer than fifteen entries were made in the first collection undernoted, and twelve in the second, while Leeks and Celery were contributed in enormous quantities.

For a collection of vegetables, thirteen varieties, open to gardeners and amateurs, first prize the Veitch Memorial medal with £5 added, there were fifteen entries, but several entrants at the last moment failed to appear, leaving the tables rather blankly in appearance. The first prize was awarded to Mr. C. Traill, gardener to John Marshall, Esq., Ashgrove, Kilwinning, with fine Lyon Leeks, fine Standard Bearer Celery, good Autumn Giant Cauliflower, grand Cranston's Excelsior Onions, very fine Exhibition Marrowfat Peas, Muir's Cream Marrow, Canadian Wonder Beans, Winningstadt Cabbage, Carrots, Parsnips, Beet, good Turnips, and Bountiful Potatoes. The second prize went to Mr. Brown, gardener to A. A. Spiers, Esq., Houston, Johnstone. Here the Leeks were really grand, the Lyon, with good Major Clarke's Celery, fine Cauliflower, grand Matchless Carrots, Dobbie's Select Parsnips, Satisfaction Potatoes, and the Gladstone Pea. This lot was scarcely, if anything, inferior to the first lot. The third ticket was awarded to Mr. Dymock, gardener to B. Wentworth Vernon, Esq., Stoke Bruerne, Towcester, his Ailsa Craig Onions and Celery being very fine. The fourth prize was gained by Mr. Beckett, gardener to Lord Aldenham, Elstree, Herts, Ailsa Craig Onions, Student Parsnips, and Matchless Carrots being the best dishes in this collection.

The next class was a collection of vegetables in thirteen varieties, open to gardeners and amateurs, prizes being from Messrs. Sutton and Sons. In this class Mr. Gibson, gardener to R. H. Hudson, Esq., Danesfield, Great Marlow, was first with a grand lot, by far the best in the show, embracing Tender and True Cabbage, immense Standard Bearer Celery, good Prizetaker Leeks, fine Ailsa Craig Onions, lovely New Red Intermediate Carrots, grand Student Parsnips, Sutton's Black Beet, Duke of Albany Peas, Canadian Wonder Beans, Satisfaction Potatoes, Sutton's White Marrow, Autumn Mammoth Cauliflower, and Snowball Turnips, the latter the only poor dish in the exhibit. The second ticket went to Mr. Walden, Dollar Beg, for a very good collection of clean, large, well-grown vegetables. Mr. J. Brown, gardener to A. A. Spiers, Esq., Houston House, Johnstone, obtained the third prize.

The class for a collection of vegetables in nine varieties was also keenly competed, Mr. J. Paull, Drumbeg, Killearn, being a good first with grand Leeks, Onions, Turnips, Cauliflower, and Peas. Second, Mr. Hugh Watson, Crossford, Carlisle, with a less heavy lot. Third, Colin K. Macphail, Esq., Ardeer House, Bonhill Road, Dumbarton. In all these classes one felt for so many high-class contributions having perforce to go without any distinctive mark of merit. For a collection of Potatoes, twenty-four varieties, six of each, Mr. J. Gemmell, Flakefield, Chapeton, was first with fine, well developed tubers of The Foreman, Nonesuch, The Dean, coloured; Yeoman, coloured; Goldfinder, Mr. Bresee, Snowdrop, Satisfaction, Windsor Castle, Bountiful, The Trowse, Round Red, Sensation, fine; Herd Laddie; Britannia, Matchless, Abundant, Centennial, Sutton's Seedling, Reading Russet, Purple Pet, Empire, Scotch Triumph, White Eyes, and Duke of York. Second, Mr. Service, Dumfries.

For a collection of Tomatoes to occupy a space 6 feet by 4 feet, foliage and plants allowed, Mr. Hugh Bennie, Loons Nursery, Troon, came first. This was a nice even lot of fruit, none of the varieties of which it was composed, however, being named. Second, Mr. J. Hood, gardener to T. G. Bishop, Esq., of Dalmore; third, R. Morton, Esq., Braidwood, Carlisle. For forty-eight Tomatoes Mr. J. Mailer, Kelvinvale Nurseries, Lorraine, was first with Comet Improved, &c.

Miscellaneous Exhibits.

The miscellaneous contributions were not so numerous as at the show the week previous, but among these was included the splendid exhibit of Messrs. Sutton & Sons, Reading, and which occupied the centre of the fruit tent, and is further alluded to below.

Messrs. G. Bunyard & Co., Maidstone, set up a nice collection of

Apples in about fifty dishes; of Pears twelve dishes, with Crab Apples and a dish of Burbank Plum. The Apples were not so large as we have seen them from the famous Kent firm, but they were beautifully coloured, more particularly Duchess of Gloucester, Red Astrachan, Bietzheimer, Williams' Favourite, very pretty; White Transparent, Lady Sudeley, Worcester Pearmain, James Grieve, fine; Duchess of Oldenburg, and Cardinal. Of Pears were fine dishes of Grégoire Bcurdillon, Marguerite Marillat, Dr. Jules Guyot, Clapps' Favourite, and Beacon.

Messrs. A. Cross & Sons, Glasgow, had a nice exhibit of garden produce to illustrate the beneficial effects of Cross's garden fertiliser. Splendid examples of Alicante and Gros Colman Grapes, Peaches, Nectarines, and a variety of good vegetables were shown.

A large assortment of fruit and vegetables was arranged by Messrs. Smith & Simons, Glasgow, including Grapes, Peaches, hardy fruits in

Golden Ball Turnips, Lettuces, &c. Messrs. Buchanan Bros., Kippen, showed some new Grapes.

From Messrs. Sinton & Sons, Reading, came a massive group of flowers, vegetables, and fruit, occupying some 900 square feet, arranged on a stepped construction oblong in shape with rounded ends. There were square little groups of Begonias double and single, Lily of the Valley, and various Asters, with bands of Begonia Gloire de Lorraine, Ferns, and Asters, dividing the several tiers from each other. A steep bank, composed of various plants in condition at this season of the year, formed an effective finish at its apex. Of vegetables, New Intermediate Carrots, Perfection and Sunbeam Tomatoes, White Ivory Celery, good Prizetaker Leeks, and Best of All Runner Beans, were conspicuous by their excellence. Cut flowers included good strains of Verbena, Phlox Drummondii, Marguerite Carnations, and other good flowers. The whole was edged with grass growing in little cutting boxes.



LEEIA AMABILIS. (See Note on page 245.)

variety, and a collection of ornamental Gourds, with stove and greenhouse plants.

Messrs. A. Lister & Sons, Rothesay, arranged a large lot of their new Tomato Lister's Prolific, having plants to show its abundant fruiting qualities, and a number of dishes of ripened fruits to illustrate its quality, the fruits of medium size and brightly coloured. Herts Apples were exhibited by Campbell & Getting, Glewstone, Ross, those represented being Worcester Pearmain, Prince Albert, Ecklinville, Warner's King, and Lord Suffield.

A large exhibit, comprising Grapes, Tomatoes, and Melons, were on show from Guernsey. The Ichthemio Guano Co., Ipswich, showed a small collection of plants and fruits grown with the aid of their special manures.

Messrs. Dobbie & Co., Rothesay, had forward a good display of vegetables, including examples of a very fine strain of Parsley, a large variety of Tomatoes, Gourds, International and Champion Leeks,

Royal Horticultural of Ireland, August 27th.

A general summary of the show held by above society would suggest an improvement in quality, whilst entries were fairly numerous in their respective classes. Begonias made a superb display, though Sweet Peas were weak. Hardy flowers made a notable group, though there was a decided tendency to stage too many Liliums by the individuals. Groups of plants were good, the vegetables were up to the usual normal level. Fruit was shown to advantage, while Grapes were probably the finest we have had. Peaches, Apples, Plums, and Melons were well done, but Nectarines and Pears were rather weak.

The respective nurserymen's displays were very fine. The Messrs. Watson, Clontarf, had a fine array of Cactus Dahlias at the back of their stand; their name, &c., was worked in border Carnations, and received a medal. Messrs. Dicksons, Chester, had a huge bank of hardy flowers, the collection of Phloxes dominating, and this also obtained a medal.

Messrs. Hartland of Cork showed Begonias to advantage, also a superb display of fruit, whilst Gladioli were very fine and recommended for a medal.

Messrs. McGredy, Portadown, had Begonias arranged in fan shape, the ground being filled with Adiantums; Gypsophila paniculata was used to lighten the effect, but the cut blooms were a shade too many (recommended for a medal). Messrs. Ramsey & Son, Ballsbridge, had a fine array of cut blooms, and Messrs. Drummond & Sons, Dublin, had a tent filled with hardy plants (recommended a medal). As usual the Botanic Gardens, Glasnevin, had erected a huge bank of exotic plants, forming a chief feature. It seems strange why they are banked up; such procedure completely prevents a detailed examination by the visitor (gold medal). Messrs. Dicksons of Newtownards had Roses in fine style, also an equally good collection of hardy plants, with Cactus and decorative Dahlias, likewise retaining premier honours in the competitive nursery classes for Cactus Dahlias, and for the box of forty-eight blooms of Roses.

For the group of foliage and flowering plants, Mr. J. Byrne, gardener to D. Drimmies, Esq., Bellevue, Booterstown, easily wrested the premier honours. He was also first for specimen Orchid with Epidendrum prismatocarpum, a fine pan encrusted with bloom. For exotic Ferns Mr. Colohan, gardener to F. A. Millar, Esq., Windsor House, Monkstown, was first with fine plants of Davallias and Adiantums. For a stand of Cactus Dahlias of twenty-four blooms, not less than twelve varieties, Mr. Rigg, gardener to Lord Cloncurry, Lyons, Hazlehat, won, and likewise had premier honours for a stand of twelve Cactus Dahlias in at least six varieties; also for twelve bunches of pompon Dahlias in at least six varieties. Gladioli were capably shown by Mr. Andrew Porter in the stand of twenty-four spikes in a dozen varieties. In the stand of twelve, in six varieties, Colonel Jarvis White, Healthfield, co. Wexford, was first. For a stand of thirty-six double Begonias, at least eighteen varieties, for the Hartland Challenge Cup (Lough Nurseries, Cork), Mr. P. Flanagan, gardener to Hamilton Stubber, Esq., Moyne, was an unquestioned first with an evenly arranged box of almost faultless blooms. In a stand of twelve doubles Mr. Rigg led with a choice box of blooms.

Mr. Porter retained the Ardelaun cup, value £10, for his collection of hardy flowers, covering a space of 16 feet by 4 feet, which was tastefully grouped. Mr. Webster, gardener to Lord Plunkett, Bray, was a close second. Carnations were small but compact flowers. The premier award fell to the stand of Surgeon-General Beaumont, Palmerston House, Dublin. Sweet Peas were well shown by Mr. E. H. Cole, gardener to Lord Dnnleath, Ballywalter Park, co. Down, whose stand was artistically arranged; the blooms were large, and enabled him easily to outdistance his competitors. The other stands do not call for comment, as there was no attempt made to display the flowers to advantage.

Fruit, especially Grapes, was very fine. For six bunches, three varieties, two bunches of each, Mr. Andrew Porter was first, and was closely followed by Mr. R. McKenna, gardener to Lady Emily Bury. For white Grapes, Mr. Andrew Porter was first both in the Muscat classes and "for any other." In this latter stand "the Duke" was staged very well. For black Grapes, Mr. J. Colgan, gardener to Mrs. Meade, St. Michael's, Ailesbury Road, Merrion, was first with magnificent bunches of Black Hamburgh. For Melons, Mr. Tyndall, gardener to C. Burrowes Roche, Esq., was first in both classes with choice fruit. Mr. Webster, gardener to Lord Plunkett, easily retained premier place in the class allotted for Peaches with fine fruit. Apples were capably shown by Mr. R. McKenna, gardener to Lady Emily Bury, also by Mr. P. Geoghegan, gardener to J. Millar, Esq., Baginbun, Sandymount, who took premier place; the former also took first for Pears and Plums, not Gage; for the latter Mr. Tyndall, gardener to C. B. Roche, Esq., Giltown, was first; he likewise took a similar place for the tray of twelve distinct vegetables. For the tray of six kinds Mr. G. Bogue, gardener to Mrs. Beveker, Castlemartin, Newbridge, was first, the quality all round was of a high order. A Miss Conan showed a fine pan of a Stagshorn Fern, whilst a journeyman, Mr. Lees, in Sir Malcom Inglis' gardens, Montrose, Donnybrook, displayed a model of a garden, with raised parterres, beds filled with flowers and shrubberies, also walks; the style was severely formal. It was a meritorious piece of work, and worthily deserved recommendation. Six fine exotic Ferns were also displayed by W. F. Cotton, Esq. (not for competition), and were highly recommended.—A. E. O'NEILL.

Preston, September 4th and 5th.

The first honours for a display of hardy flowers fell to Mr. W. Troughton, Fishergate, Preston, with a superb stand. From the centre arose a pyramid of cut stems of Lilliums album, Krætzneri, and Melpomene, and on either side smaller pyramids composed entirely of Lillium longiflorum, the foliage used being extremely snitable. The second prize went to Mr. P. W. Hayes, Preston, with a splendid collection. Very fine indeed was the third prize lot from Mr. Shand of Lancaster, which consisted of huge bunches of all the leading sorts.

For a 200 feet group of plants staged for effect Mr. W. Troughton again scored a decided victory. Mr. E. Payne was placed second. There was much material and a certain amount of artistic work shown,

but the finish might certainly have been better. The 100 feet group went to J. B. Dixon, Esq., Ribblesdale House, Preston, with a fairly good arrangement, in which were noticed some fine Cockscombs judiciously used. Mr. Dixon had a handsome Stephanotis, Allamanda Hendersoni, and the ever welcome Rondeletia speciosa as the best of his six stove and greenhouse plants. The same exhibitor had great success amongst the many plant classes with quality that left nothing to be desired, winning with six good Fuchsias, six exotic Ferns, Adiantums tenerum and connatum, and Gleichenia dicarpa the most noticeable; for three Lilliums, speciosum rubrum and album, Krætzneri, the best specimen a fine plant of the latter variety; three Petunias, poor; six British Ferns, extra fine; three tuberous Begonias, all the Pelargonium classes, three Cockscombs, and a grand piece of the Royal Fern as the best specimen British. Mr. Dixon's success was well merited, owing to keen competition. Mr. G. Morgan, gardener to H. Dewhurst, Esq., Lostock Hall, had many good specimens, his successes being with three Fuchsias, six well-grown tuberous Begonias, and three handsome Balsams.

If one had to look for quality of the highest possible kind it was found in the classes won by Charles Parker, Esq., Ashton-on-Ribble, who won with handsome plants of Odontoglossum grande, Cattleya Harrisoniae, and Cypripedium ciliolare. His single Orchid, which gained the prize and also the gold medal, was a seedling raised by Mr. Parker, Rothschildianum x Lawrenceanum, a gem in every way. There was also the same high class in the collection of stove and greenhouse flowers; sprays and buttonholes saw Mr. Parker well ahead.

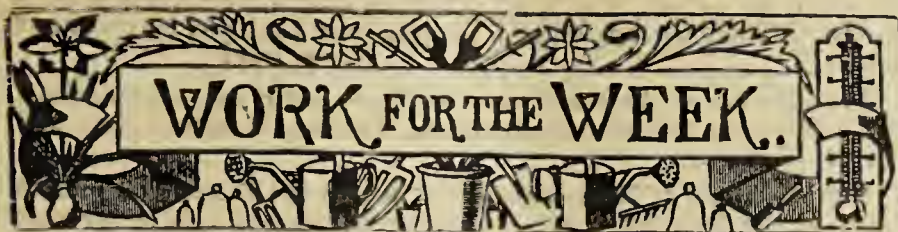
Cut flowers were so abundant that only a few can be noticed. The bouquets were of the best, Mr. Troughton again scoring with a lovely hand bouquet, and Mr. W. N. Wood with an exquisite bride's bouquet. The Sweet Pea class was worthily won by Mr. B. Ashton, gardener to the Earl of Lathom, Lathom House, Ormskirk. To the credit of a cottager, Mr. R. Moss, let it be said that he was quite beyond reach in the classes for twelve Cactus and twelve Show Dahlias. In Pompon Dahlias, twelve perennial Phloxes, a furnished epergne, &c., Mr. Moss gave a fine account of himself. Gladioli and Viola classes fell to Messrs. Ashworth and Gardner.

Fruit, with the exception of the first and second classes in the collections, was not up to the mark. Mr. B. Ashton made no mistake in the six dishes, staging grand Madresfield Court and Buckland Sweetwater Grapes, Earl of Lathom Melon, Brown Turkey Figs, Walburton Admirable Peaches, and Elruge Nectarines. Mr. J. Bradshaw, gardener to Mrs. W. Birley, The Larches, Ashton-on-Ribble, second, having conspicuous Muscats, Royal George Peaches, and Pond's Seedling Plums. In this class there was a stand containing over-ripe or decayed Peaches and Pears, and the judges did perfectly right in not entertaining them. Mr. Ashton had splendid Madresfield Court and Muscats, winning each class; Messrs. C. R. Brown and J. Bradshaw good followers. Extra good Peaches and Nectarines came from Messrs. J. Jones, gardener to R. H. Fenton, Esq., Dutton Hall, and R. Janson, gardener to T. R. Wilkins, Esq., Loughton. Mr. Ashton also won with a splendid six dishes hardy fruits, and six dessert Apples. Melon classes went to Mr. Morgan with unnamed specimens, and Plum classes to Mr. P. Rigby, gardener to J. Smith, Esq.

Vegetables were of a high character, Mr. Ashton taking all the most important class. Mr. Morgan won for eighteen Tomatoes and six, Mr. Ashton following. Mr. Troughton made a splendid secretary, and was ably assisted by several good supporters. He received two certificates for British Ferns also. The weather was of the best, and the attendance very large.—R. P. R.

Shirley Gardeners.

The members of the Shirley District Gardeners' Association held their annual outing on Wednesday, September 4th. Arrangements having been made by the hon. sec. (Mr. J. Miles) with Messrs. James Veitch & Sons to visit their nursery at Coombe Wood, Kingston Hill, the party, accompanied by their chairman (Mr. B. Ladhams, F.R.H.S.), treasurer (Mr. Greenslade), and the hon. sec., entrained at Southampton West, where special compartments were reserved for their comfort. Arriving at Surbiton, they continued by bus to the bottom of Kingston Hill, finishing the journey on foot. On arriving at the nursery they were most hospitably entertained to lunch, to which every member did ample justice. Lunch over, the party divided into three groups, and were shown round these delightful grounds by the genial foreman, and plants pointed out which would otherwise have been missed. After some hours spent in gleaning useful knowledge, the party met outside the office, where the treasurer proposed, and the secretary seconded, a very hearty vote of thanks to Messrs. James Veitch & Sons for so loyally entertaining them, and to the staff, who did their best to help pass a very pleasant afternoon. On leaving Coombe Wood a start was made for Hampton Court, where again good use of the time was made in viewing the lovely grounds, which are now at their best. The party finished up its tour of inspection by seeing the noted Vine, with its hundreds of bunches of Grapes. Outside the Palace grounds the members had tea, after which they returned to Surbiton, where they entrained for Southampton, reaching the latter at 10.30 p.m., where all agreed that it was one of the most pleasant days spent by the members of the association.—J. M.



Fruit Forcing.

Vines.—Midseason Houses.—When the Grapes have been cleared from the Vines divest the shoots of their laterals down to the principal buds, which are to be retained for the next year's fruiting, but be careful to avoid injuring the old leaves, for upon their preservation in health depends the maturation and plumping of the buds, also the storing of nutrition in the adjacent wood as well as the ripening of the wood, which is essential to a good break and a proper development of the bunches and foliage in the early stages of growth next season. Allow a free circulation of air, and in the case of luxuriant or young Vines, or where there is the least doubt about the thorough maturity of the wood, maintain a gentle warmth in the hot-water pipes. After the removal of the laterals clear off the remains of the mulching or remove the loose surface soil, particularly near the collar of the Vines, picking the old soil from amongst the roots, and supply lumpy loam, with a fourth of sweetened manure, a fifth of old mortar rubbish, and a twelfth of wood ashes added and intermixed, in its place. Avoid burying the roots deeply, a couple of inches is deep enough. They will push adventitious roots into the new material, and these can be encouraged to any extent by timely surface dressings or light mulchings, when the Vines are in need of support another season. If a handful of approved Vine manure per square yard is applied, it will aid the Vines wonderfully in the early stages of growth another year. Inside borders will need watering, so as to keep the soil healthfully moist. In the case of borders that are only partially made, a breadth of about 2 feet may be added to the front, choosing dry weather for the operation and compressing the materials moderately. If inside afford a good watering, if outside it will not be necessary unless the compost is dry.

Late Houses.—The thin-skinned Muscats, such as Canon Hall, the most splendid in appearance and the highest in quality of all Grapes when well done, and Muscat of Alexandria, also Madresfield Court, are very impatient of a stagnant and moist atmosphere, the two former spotting and the latter cracking. They require fire heat until thoroughly ripe, with a free circulation of air in the daytime, and enough at night, with gentle warmth in the pipes, to insure a circulation of air, to prevent the deposition of moisture on the berries, being careful to admit air rather freely on fine mornings, and before the sun acts powerfully upon the house. Continue this until the Grapes are thoroughly finished, when a gradual reduction of temperature may be made to about 50° at night. But there must not be any great hurry in this, as the Grapes put on colour long after they appear finished, and improve in quality so long as there are any leaves on the Vines. Keep the border moist by watering as necessary in the early part of a fine day, for though the leaves become yellow at the edges they have green parts that are more or less useful in elaborating and storing food. Moisture must be kept down by free ventilation; it is pent-up air, with a sudden increase of temperature from sun heat in the early part of a fine day, or at any time, which causes moisture to condense on the berries, which "spots" and facilitates the germination and growth of ripe "rot fungus," *Glaeosporium laticolor*, when the berries speedily decay.

Late Thick-skinned Grapes.—These are less affected by atmospheric moisture than thin-skinned, Mrs. Pince shrivelling in a house where there is sufficient moisture to cause Muscat of Alexandria to rot. They are also liable to give evidence of finish that will not bear close examination; therefore make sure that the berries are well finished up to the shanks before ceasing the needful aid from fire heat. In a confined atmosphere Gros Colman sometimes splits at the nose of the berries when ripening, also Gros Guillaume in less degree. Alicante and Lady Downe's finish better and in less time than other late thick-skinned Grapes. Then the latter should be given more time, also the white varieties, Trebbiano, Calabrian Raisin, and Syrian, and after they are apparently finished a temperature of about 55° should be assured, advancing to 60° or 65° by day and a circulation of air until the foliage is giving indications of falling, when a temperature of 50° is sufficient. The inside border should be watered in the early part of a fine day, and air be freely admitted, for it is not so much the moisture as its confinement that causes berries to spot and crack. Outside borders will be quite damp enough from the recent rains. In case of very heavy rains it is advisable to cover outside borders with spare lights to throw the water off, especially when this is liable to hold moisture.

Late Hamburgs.—Houses of these that were allowed to start naturally may need a little fire heat to colour and finish the Grapes satisfactorily, as they will, when it is hopeless to do anything more with the thick-skinned varieties. They should have a temperature of 60° to 65° at night, and 70° to 75° in the daytime, with a circulation of air constantly, and free ventilation when favourable. Water the inside border if necessary, and when the Grapes are only partially advanced

in ripening. Only restrict the laterals to prevent overcrowding, as a good spread of foliage over thin-skinned black Grapes is the best safeguard against the sun taking colour out of them when ripe. When the Grapes are thoroughly finished reduce the temperature, maintaining it at about 50° by artificial means by day, and 45° at night, with a little air constantly.

Young Vines.—Afford every encouragement essential to the perfecting of their growths, keeping the foliage clean, removing all lateral growths, as those produced after this time are of little value, and maintain a warm, well-ventilated atmosphere until the canes are thoroughly matured. Any supernumeraries intended to fruit next season should have the laterals cut away to the principal buds, leaving, however, an outlet for the sap by a few joints of the laterals beyond the length of cane to which they are to be shortened, and be careful not to injure the principal leaves. If the wood does not ripen kindly, it may be accelerated by keeping the house rather close in the daytime, so as to get a temperature of 85° or 90° from sun heat, opening the ventilators at night. Afford sufficient water at the roots to prevent the foliage becoming limp and no more.—ST. ALBANS.

The Kitchen Garden.

Potatoes.—A commencement should now be made in digging up the crops of Potatoes, dealing first with all those which have completed growth, and have died or are dying away. Such as these will be better out of the ground than in, especially if the weather should turn damp. The crop can be turned out much better when the ground is dry, and given fine weather for a few days the tubers become thoroughly dry, in which state they can be readily stored. As a rule it is the best plan to lift just so many rows as can be dealt with in a day, turning the tubers out on the surface early in the morning, exposing them throughout the middle of the day to sun and air, and picking them up into sacks before night. The choicest tubers ought to be secured in good condition. The smaller can be picked up under less favourable conditions, but they must not remain on the ground long. Potatoes must be stored in a dry place, where they can be kept from frost. Where there is a quantity, and storage room is scarce, pitting or clamping will meet the difficulty. Select a dry well-drained position. Take out a foot of soil 3 to 6 feet wide, and form a ridge of tubers; cover well with straw, and finally with soil. Damp tubers must not be stored in this way, or damage may result from heating.

Cabbage.—The August sown Cabbage should be planted out in quantity now. Good ground is essential, but it must be made so rather by previous manuring than digging in rich material now, which will cause a succulent growth. On very poor and hungry soil manure must be given, but even such ground will be better improved by deep digging and little manure rather than shallow preparation with much manure. Plant the Cabbage in rows 2 feet apart, and rather thickly, so as to admit of cutting out every other one rather freely in spring for early use, or the plants may be transferred to other positions. Plant firmly, burying the stems to the bottom leaves.

Celery.—During the present month Celery advancing in size may be freely fed with liquid manure or top-dressing of artificials may be applied and watered in. Early rows may be fully earthed so as to become blanched for use in a few weeks' time. Rows about to be earthed for the first time should first have all superfluous suckers and leaves from the base trimmed away. Secure the remaining leaves closely together with a loose strand of raffia grass tied round. This serves to prevent soil working into the hearts of the plants or between the leafstalks, but at first the earthing up must not be carried too high. After the final earthing Celery is ready for use in three or four weeks.

Leeks.—Leeks grown in trenches should receive plenty of water and liquid manure. Then remove some of the bottom leaves, slightly shorten the remainder, and earth up the stems. Good Leeks may be grown without trenches, but the latter are convenient for feeding and applying soil for blanching.

Lettuce.—Plant out the thinnings from the early August sown rows on moderately good ground. If established now the plants will attain strength for passing through the winter. A last sowing may be made on a sheltered border.

Endive.—Seedling Endive, too, may be planted out. Encourage the forward plants by hoeing. Those that are fully grown and ready for blanching may have the outer leaves tied together to effect this, or an inverted pot with the hole corked or stopped can be placed over each plant. The hearts will also blanch well under a slate, but it should be laid on when the plants are dry.

Spinach.—Winter Spinach may be freely thinned out, as isolated plants stand the winter better than crowded rows. Remove weeds, and give an occasional hoeing between the rows.

Outdoor Tomatoes.—Fruit setting after this date has little chance of becoming ripe, so the growth of the plants may be stopped, the larger leaves shortened, and the lower foliage removed, thus fully exposing the fruit to the sun.—LYMINGTON, HANTS.

Query.—Can anyone tell who are the publishers of the book entitled "The Botanic Gardens of Europe?"



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Tulips and Gladioli (S. T.).—We never give the names of seedsmen. Let the seedling Gladioli remain, but well covered with coal ashes in winter to exclude frost.

Asphalte (N. R.).—It would do very well for flooring a greenhouse. It is made of lime rubbish two parts, and coal ashes one part, both very dry and sifted fine. In a dry place, and during dry weather, mix it with boiling-hot coal tar into a mass as thick as mortar, put it 3 inches thick to form the floor; sprinkle over it coarse, dry sand, and when cold pass a light roller over it.

Books Wanted (Young Gardener).—We do not know of any very cheap work on "stove or greenhouse plants." Mr. B. S. Williams, Paradise Nurseries, Upper Holloway, London, N., published two volumes in 1883, which may probably still be had; the price was 7s. 6d. John Murray, Albemarle Street, London, publishes a grand book on the subject (the best in fact), by Mr. T. Baines; price either 16s. or a guinea, we are not sure. There is the "Encyclopædia of Gardening," by T. W. Sanders (Collingridge), which, however, treats very meagrely; price about 2s. 6d.

Lilium giganteum not Flowering (K.).—If kept dryish all the winter, the Lilium in your greenhouse may do well enough next spring; but all things considered, unless this can be done, we would repot it carefully, and keep it in a cool place free from frost, patting the earth in firmly, and just seeing that the roots did not suffer from dryness. When it commenced growing next season, we would set the plant on moss kept moist, or in a saucer with half an inch of water in it, in preference to watering much on the surface, until growing freely.

Ulcerated Grapes (A. Y. W.).—They are so much affected by what is technically called "the spot," that the berries are totally gangrened. We have little hesitation in saying that it is occasioned by the want of sufficient activity in the roots, so that they do not supply sap in quantity sufficient to keep pace with the demands of the growth within the house. If the roots were kept warmer, and supplied with a little tepid liquid manure during the berries' growth and ripening, such ulceration would not appear. The roots might be kept warmer by exposure of the border to sunshine, and covering at night and during cold days.

Building a Vinery (An Old Subscriber).—You propose building a vinery, 60 feet long and 15 feet wide, in Yorkshire. If the natural advantages of your place be good, we see no reason why your undertaking may not become a good investment if you go the right way to work. First of all, secure good drainage; and though you mention you do not intend to heat the house at first, still let the mode of heating it be considered at the time of building, as it will most likely have to be done after, and may be more difficult then. And as coals are cheap in Yorkshire a good fire may serve your purpose. Keep the house, or rather the border, above the level of the surrounding ground rather than under it, and if you only want it for growing Grapes glass in the front may be dispensed with; only if the front wall be more than 3 feet high there ought to be glass; if below that, sliding shutters not less than 2 feet square and 3 feet apart may be worked in for ventilation. Rafters and sash-bars fastened to a purline in the middle will do very well if the whole of the glass is to be fixed, which it may be if thought well of, having a board not less than a foot wide to act as a flap to give air at top. This, in addition to the doors at the ends and the front shutters, will do very well. We do not fully understand your ideas about the glazing; but assuming you to use 21-oz. glass, squares about 8 inches wide and about 20 inches long, work in very well, it is better not to have them any wider, and the Vines may be planted a yard apart. And as the house is to be used only for Vines, wires stretched the whole length of the house, and about 1 foot from the glass and 1½ foot from each other, answer as well as any way; and if the end fastening be good, any small wire will bear them from the rafter or glazing-bars, and you can train your Vines any way you please. If the materials for your Vine border be good, you will have canes fit to carry a fair good crop in two years; and some soils in North Cheshire, Lancashire, and Derbyshire seem to contain in themselves everything wanted to secure good Grape growing. At all events, let good drainage be thought of at the beginning, and other things will present themselves to you in a manner that will prompt you to understand their wants; and our columns are ready to reply to any further communication you may think fit to make.

Identification of Palm (S. P.).—Most likely a *Seaforthia*, as you surmise, but only an expert seeing the plant could tell you correctly and definitely.

Book (A. F.).—"Vegetables for Exhibition and Home Consumption," by E. Beckett, is published by Simpkin, Marshall, Hamilton, Kent and Co., Ltd., London.

Superphosphate of Lime—Sulphate of Ammonia (W. Adams).—About 5 cwt. of the first and 2 cwt. of the second per acre is an average quantity to apply to your light land grass. Apply them in the spring. We should sow them broadcast over the surface during wet weather. Apply to the artificial manure companies for other information.

Report of Sandy Horticultural Society's Show.—Our attention is called to a mistake made by our representative who reported the above society's show for us. The report appeared on page 229, last week, and in the bottom paragraph but one the first prize for the best twelve bunches of stove and greenhouse out flowers was taken by Mr. C. Forbes, head gardener to E. Bird Foster, Esq., Anstey Hall, Trumpington, Cambridge, and not by Mr. T. Lockie, as we stated. The names of the flowers were *Allananda Hendersoni*, *Plumbago capensis*, *Vallota purpurea*, *Nerine Fothergilli*, *Achimenes Mauve Perfection*, *Hoya carnosa*, *Bouvardia grandiflora*, white *Begonia*, *Hæmanthus coccinea*, *Crassula (Roechea) falcata*, *Criuum Moorei*, and *Schubertia graveolens*.

Grapes not Colouring—Figs not Ripening (A Three Years' Subscriber).—It is no easy matter to account for Grapes not colouring well at certain times, as there is sometimes an unaccountable capriciousness in certain Grapes to do so. Generally speaking, there is something wrong when they do not colour well, as, when they begin to change, the transition from green to black ought to be rapid—no hanging in the red state. Neither do all the berries in a bunch colour together, some being green while others are quite black. This is when all is right. It sometimes, however, happens that a too heavy crop occasions the berries to colour badly, or the growth of some other crop on the border occasions their doing so, or, what is quite as bad, their shanking. Perhaps this is the case with our subscriber's Vines. The description of the Vines, and of the house they are grown in, is very good; but it may be all neutralised if the border is used for flowers, and such things as *Fuchsias* are allowed to cheat the Vines. Figs like a great deal of water while in a growing condition, and they also require the full sun, which they cannot have at the back of a vinery; it is therefore only a few fruit at the top that are likely to do well. If the evil should arise from the roots of trees or other things getting into the border, remove them; and if the Vines require it, lift them up and replant, after securely making the border afresh in the manner described in former numbers of this Journal.

Indian Corn (A Devonshire Vicar).—In your climate Indian Corn would probably ripen annually, but in less temperate districts of England it has been proved to be too uncertain a crop. It requires a very long and hot summer there to ripen. It is propagated by setting the seed in equidistant rows, from 2 feet or 3 feet to 5 feet asunder. The proper season for planting it is from the middle of April to the beginning of May. For this purpose the earth is opened with a hoe to the depth of 3 inches or 4 inches, and in each hole are deposited four or five grains at a little distance from each other. As soon as the young plants appear the weeds are carefully eradicated, and the earth gradually heaped around them till the ears appear, after which they are left till the harvest arrives. The ears are then gathered, and dried in an open situation; for if this Corn be heaped together it is apt to ferment and putrefy, or to sprout and grow. The best method of preserving it is to husk, or to thresh it out, as soon as the harvest is completed, to dry it perfectly in the sun, and deposit it in cool, dry, and airy situations. Maize, in countries where it is extensively grown, is subservient to a variety of purposes; its bulky stalks afford an excellent winter food for cattle, provided they have not been cut in too dry a state. The American Indians parch the Corn carefully over a fire, without burning it, after which they pound it, sift the meal, and preserve the latter for their constant provision. In the United States excellent bread is prepared from Indian Corn by kneading the boiled flour into a stiff paste, either alone or mixed with that of Rye or Wheat, which is fermented with leaven or yeast, and then regularly baked. This bread is called Johnny-cake. It is sometimes made from the pottage of ground Maize, called homony, and is extremely palatable and nutritive. The Americans also convert the Maize into a species of malt, from which, as well as from the bread itself, they brew a wholesome beverage. The many purposes to which this grain may be applied will be found well set forth in Cobbett's work.

Names of Plants (J. N.).—*Odontoglossum grande*. (J. Morris).—1, we have been unable to compare No. 1 yet; the other is a *Salpiglossis*. (W. H. Davey).—1, *Ginkgo biloba*; 2, *Pinus excelsa*; 3, *Cupressus (Retinospora) filifera*; 4, *Sequoia sempervirens*, the Redwood of California; 5, *Abies Pinsapo*; 6, *Ailanthus glandulosa*, the Tree of Heaven. This tree produces enormous leaves when consistently hard pruned; effective for a lawn. (Kittie).—The Compositæ are, as a rule, very confusing; we think your specimens are, 1, *Rudbeckia nitida* (laciniata) fl.-pl.; 2, *Helianthus multiflorus* fl.-pl.; 3, *Rudbeckia (laciniata) nitida*; 4, *Rudbeckia fulgida* (A. L. S.).—*Lobelia elatior*. (A. P.).—1, *Solanum Seaforthianum*; 2, *Cattleya labiata*; 3, *Rudbeckia speciosa*.

Names of Fruit (A. P.).—1, Plum Cox's Emperor; 2, Apple New Hawthornden; 3, Apple Worcester Pearmain; 4, Plum Goliath.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Frog-hopper Fly.

In some seasons the Froth-insect, Cuckoo-spit, Froth-hopper, or Frog-hopper (for by all these names it is popularly known), is very plentiful, though we cannot remember it having been more conspicuously scarce than it has been this year. All its popular names refer either to the saliva-like froth in which it buries itself; to its jumping powers when full-grown, for it is closely allied to the grasshopper; or to its appearance at the same time as the cuckoo. It is the *Tettigonia spumaria* of some entomologists, and the *Cercopis*, *Cicada*, or *Aphrophora spumaria* of others. Its larva enveloped in its froth is especially prevalent upon the young shoots of the White-thorn or Quick; but it also infests the stems of Pinks, Carnations, Lilacs, and many other plants. If the froth be removed, one and sometimes two



FROG-HOPPER FLY.
(Natural size and magnified.)

small, pale green, aphid-like insects are detected. These are the larva or young of the Froth-fly. By means of its sharp rostrum or beak it extracts the sap of the plant, and voids it as an excrement in the frothy form which is its characteristic. About the end of July it sheds its skin, leaving it in the froth, and comes forth the perfect insect, which is here represented magnified. About the beginning of August the males and females may be found in pairs numerously on the plants they frequent. They are of a dirty white colour, thickly dotted and clothed with short hairs; head broad and bluntly triangular, with black lines down its centre and sides; eyes, one on each side, near the base of the head; rostrum long, bent underneath its body when not in use; antennæ ending in a fine bristle; thorax and shield (scutellum), adjoining the back of the head, brownish. The wing cases are brown, mottled with ochre, with four whitish patches on the margin; the under wings are transparent and iridescent. The legs, six in number, short, but two hind-legs longest, and formed for leaping. It is not ascertained where the eggs of this insect are deposited, but probably on the stems of the plants on the shoots of which the larva feed. It appears, however, that they can travel after hatching, for seedlings and plants raised from root-cuttings are often affected. We know of no better plan for destroying the insect than drawing the affected shoots between the fingers, and then dipping these into a bowl of water after each grasp. In the case of Carnation stems and other flowers requiring more tender treatment, all the froth may be taken from the insect by means of a piece of sponge, and itself then removed by a camel's-hair brush. It is probable that dusting each froth with Scotch snuff would destroy the insects.

Next Week's Events.

Tuesday, Sept. 19.—Great Dahlia Show at Royal Aquarium (three days).

Phenological Observations.

SEPT. 13TH TO SEPT. 19TH.	PLANTS DEDICATED TO EACH DAY.
13 Fri. Elderberries ripe.	Saffron Crocus.
14 Sat. Squirrels busily storing.	Passion flower.
15 Sun. Vapourer moth seen.	Byzantine Meadow Saffron.
16 Mon. Lime leaves falling.	Sea Starwort.
17 Tu. Goldfinches in flocks.	Narrow-leaved Mallow.
18 Wed. Dotterel arrives.	Drooping Starwort.
19 Thr. Damsons ripened.	Devil's-bit Scabious.

Trade Catalogues Received.

R. H. Bath, Ltd., The Floral Farm, Wisbech.—*Bulbs, Carnations, Roses, Paeons, &c.*
Wm. Sydenham, Tamworth, Staffordshire.—*Pansies, Violas, Roses, Pyrethrums, &c.*
Robert Veitch & Son, 54, High Street, Exeter.—*Bulbs, &c.*

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary* Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary*, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary*, Mr. Brian Wynne, 8, Danes Inn, Strand, London, W.C.

Covent Garden Market.—September 11th.

Average Wholesale Prices.—Fruit.

	s. d. s. d.		s. d. s. d.
Apples, cooking, bush. ...	2 0 to 4 0	Melons, each ...	0 9 to 2 0
" dessert ...	3 0 5 0	Pears, French Williams, 48s. per case... ..	3 9 4 0
Bananas ...	8 0 12 0	Pears, English, $\frac{1}{2}$ sieve ...	2 0 6 0
Damsons, $\frac{1}{2}$ sieve ...	1 6 2 0	Pines, St. Michael's, each ...	3 0 4 6
Figs, green, doz. ...	1 6 2 0	Plums, $\frac{1}{2}$ sieve ...	1 0 3 0
Grapes, Hamburgh, lb. ...	0 6 1 6	" Green Gages, $\frac{1}{2}$ sieve ...	2 0 3 6
" Muscat ...	1 6 3 0		
Lemons, Naples, case ...	24 0 30 0		

Average Wholesale Prices.—Vegetables.

	s. d. s. d.		s. d. s. d.
Artichokes, green, doz. ...	2 0 to 3 0	Lettuce, cos, doz. ...	0 0 to 2 0
" Jerusalem, sieve ...	1 6 0 0	Mushrooms, forced, lb. ...	0 8 0 9
Batavia, doz. ...	2 0 0 0	Mustard and Cress, pnt. ...	0 2 0 0
Beans, French, bushel ...	3 0 4 0	Parsley, doz. bnchs. ...	2 0 5 0
Beet, red, doz. ...	0 6 0 0	Peas, bush. ...	4 0 0 0
Cabbages, tally ...	1 6 3 0	Potatoes, English, ct. ...	4 0 6 0
Carrots, new, doz. bnch. ...	3 0 7 0	Radishes, doz. ...	0 6 0 9
Corn Salad, strike ...	1 0 1 3	Shallots, lb. ...	0 2 0 3
Cucumbers, doz. ...	2 0 3 0	Spinach, bush. ...	2 0 3 0
Endive, doz. ...	1 0 1 3	Tomatoes, English, lb. ...	0 2 0 2½
Herbs, bunch ...	0 2 0 0	Turnips, doz. bnch. ...	2 0 3 0
Horseradish, bnch ...	1 0 0 0	Watercress, doz. ...	0 6 0 8
Leeks, bunch ...	0 1½ 0 2	Veg. Marrows, per tall ...	1 6 2 0

Average Wholesale Prices.—Plants in Pots.

	s. d. s. d.		s. d. s. d.
Aralias, doz. ...	5 0 to 12 0	Ficus elastica, doz. ...	9 0 to 12 0
Araucaria, doz. ...	12 0 30 0	Foliage plants, var., each ...	1 0 5 0
Aspidistra, doz. ...	18 0 36 0	Lycopodiums, doz. ...	3 0 0 0
Campanula isophylla ...	4 0 6 0	Marguerite Daisy, doz. ...	3 0 4 0
Crotons, doz. ...	18 0 30 0	Myrtles, doz. ...	6 0 9 0
Dracæna, var., doz. ...	12 0 30 0	Palms, in var., doz. ...	15 0 30 0
Dracæna, viridis, doz. ...	9 0 18 0	" specimens ...	21 0 63 0
Ferns, var., doz. ...	4 0 18 0	Shrubs, in pots ...	4 0 6 0
Ferns, small, 100 ...	10 0 16 0		

Average Wholesale Prices.—Cut Flowers.

	s. d. s. d.		s. d. s. d.
Asparagus, Fern, bunch ...	1 0 to 2 0	Marguerites, white, doz. bunches ...	1 0 to 2 0
Carnations, 12 blooms ...	0 6 0 9	" yellow, doz. bnchs. ...	0 6 1 0
Cattleyas, doz. ...	18 0 0 0	Odontoglossums ...	3 0 4 0
Eucharis, doz. ...	1 0 2 0	Roses, Niphetos, white, doz. ...	1 0 2 0
Gardenias, doz. ...	1 6 2 0	" pink, doz. ...	0 6 1 0
Geranium, scarlet, doz. bunches ...	3 0 0 0	" yellow, doz. (Perles) ...	1 0 1 6
Gladioli, doz. bnchs. ...	4 0 6 0	" red, doz. ...	0 6 1 0
Gypsophila, doz. bnchs. ...	3 0 0 0	Smilax, bunch ...	2 0 2 6
Lilium lancifolium album ...	0 9 1 0	Stephanotis, doz. ...	1 6 2 0
" rubrum ...	0 6 1 0	Stock, white, doz. bnchs. ...	1 6 2 0
" longiflorum ...	2 0 2 6	Sweet Peas, white, doz. bunches ...	3 0 0 0
Lily of the Valley, 12 bnchs ...	12 0 18 0	" coloured, doz. bnchs. ...	3 0 0 0
Maidenhair Fern, dozen bnchs. ...	3 0 4 0	Tuberose, gross ...	1 6 2 0
Mignonette, English, doz. ...	0 9 1 6		

When Working Among Bees one should be very steady in moving about and opening the hives. Never open them with a snap and crash. It makes the bees very irritable to be jerked about. It sometimes happens that some of the farm stock get in the apiary and overturn a hive or two, and of course the bees are aroused and sting the animals. Perhaps the quickest way to subdue the bees is to throw a pail of water over them.

Publications Received.—"Revue Générale de Droit International Public;" "Tropical Agricultrist;" "Agricultural Economist;" "Gartenflora," September 1st: the latter contains a coloured plate of *Dianthus chinensis* and *D. caryophyllus* and hybrids from these two. "Le Jardin," a bi-monthly of general horticulture, contains a beautiful coloured plate of *Rhododendron Madame Felix Gnyon*. "Le Moniteur d'Horticulture" furnishes a coloured plate of *Begonia Vernon*. "Catalogue of Garden Literature," by Hugo Streisand, 53, Angsbürger Strasse, Berlin, W. 50. "American Gardening;" "North British Agricultrist;" "Bulletino della R. Società Toscana di Orticoltura."



Forage—Catch Crops.

SOMETHING to take the place of the grass and seed crops that should have been, something to fill the empty stomachs of many poor animals, and something to put a little money into the master's pocket. Wheat growing seems about worn out; just a little to make some necessary straw, but as little as ever you can help. Devote your energies to stock raising, make milk, make mutton, the first rich, the second small and well fed. If the land will not pay the rent by producing one crop per annum make it grow two; in fact, if you are to make money by stock you must greatly increase the head, and by so doing the mouth is increased too, and then the riddle to be solved is this, What to set before so great a multitude?

There is no doubt about it that money is still to be found in sheep, provided you have the right sheep and the right district. Big mutton has gone out of fashion; big mutton meant big fleeces, but as a big fleece is of no account and a small joint is of great account, the fancy is now for cross-breds, and many of the Down varieties. It used to be an axiom that sheep required much room; and so they do, some varieties. Others, again, will do well in confined spaces. The Hampshires, for instance, will bear close folding, and we have heard of instances of the same land carrying Hampshire sheep twice or three times during the summer without any ill results. We hear a good bit of permanent pasture, of saving the labour bill by laying down more land to grass, but it is not grass that will bring the best results with sheep. Grass soon gets tainted, and once tainted does not recover itself for some time. Besides, grass does not grow the weight per acre that is necessary to make sheep breeding a success. Permanent pasture is not made in one year or two, whereas from a well cultivated arable plot good feed is produced at once and in good measure.

England has such a variety of soils that it is totally impossible to lay down hard and fixed rules for cultivation. That's where the individual science must come in. It remains for each man to review the situation—take every feature into consideration and then go carefully to work. We do not say jog along in the old lines, but do, if possible, make a little deviation when practicable. We learn quite as much from our failures as from our successes. Forage and catch crops seem best to suit the chalk districts of the south, the chalk districts which have proved such a healthy home for sheep. Certain crops do well in the north, but as a rule the seasons are too backward. There may come a season (like the present, for instance) when a bit of catch cropping will bring fine results; harvest is over early, and the season, after the fine rains, is warm. It is astonishing what a reserve of warmth there is in the soil, even after two or three rainy days. Catch crops are sown on Wheat stubble which is intended for roots next year. The first crop that occurs to the reader will be Trifolium, or crimson Clover, which is easily cultivated. Drag or harrow the stubbles two or three times. Sow 20 lbs. per acre, harrow twice, and roll. This ought to be ready to fold (according to the season) late April or May. The earliest sown is best mixed with a bushel of winter Barley, and if this is used 6 lbs. of seed per acre may be saved. For late sowing use 14 lbs. Trifolium seed, half-bushel Vetch, half-bushel winter Oats. Sow the seeds separately, and harrow all well down. September (the end) is quite late enough for Trifolium sowing, or the land cannot be got ready for Turnips. Rye is another crop that comes in handy for spring; indeed, if sown early enough, and the autumn be open, there may be a feed off it in November; 2½ bushels per acre should be sown. Winter Barley is also useful, but it comes into use later than Rye. Vetches, or Tares, should be sown from August to November, so as to give a supply of green fodder from May to October. The earlier these crops are off the ground the better, or otherwise the root crop will be but light; indeed, it is the best policy to sow Wheat after Vetches, as the risk of getting a decent root crop is too great. These catch crops are not considered to need either muck or tillages, and the roots that should follow them will want 2 cwt. superphosphate per acre.

By a system of catch-cropping, on lines like the above, on the wide-lying farms of Wilts, Berks, Dorset, and Hampshire, great flocks of sheep are kept, 1000 sheep to 1000 acres in winter, and 2000 to 1000 acres in summer. The ewes, up to the time of lambing (January), are kept upon old seeds, Sainfoin, and rough grazing, and

then, with their lambs, are folded on Turnips or Swedes grown after a catch crop. In April the flock spend the day in the meadows, and at night are folded on Rye; this till the winter Barley is ready for them. Then comes the early Trifolium, and the late takes them on till the Tares are good meat. These see them through July, when there is Rape, Cabbage, and early Turnip, and the eddish of Clover or Sainfoin. Of course, in addition they get a good bit of cake, which is not grudged, as they leave its value, and more, on the land. On a sheep farm there should always be Mangolds, and they can be grown year after year on the same land with perfect impunity, in fact we almost fancy they get better; and as for their lasting qualities, we saw some unearthed to-day fresh and good.

There is another difficulty with respect to catch crops that does not arise from the weather, and it is a difficulty that we do not wish to minimise. It is the labourers, who may make things look awkward. Of course this applies to a farm where the master, from stress of circumstances, is making a fresh departure; the fresh departure may entail extra work, or work for which he has no liking. As we have said before, a stupid, pig-headed man is most difficult to manage, and he will spoil the best plans through simple wilfulness. We cannot say, "Get rid of the man," for where is his successor to come from? We can only say coerce him, by fair means or foul; he is really only a means to an end. There is another point about forage crops that should be taken into consideration. These crops draw from the soil latent manures that no other crops can reach, and thus they not only are in a great measure self-supporting, but they act as recuperative agents to the land. There is no fertiliser yet equal to the sheep, and where land is light the tread of the sheep, which is said to be golden, will give it a certain solidity that nothing else can.

Work on the Home Farm.

We are having fine weather and cold drying winds, which are excellent for belated harvesters, but we could do with a really good soaking of rain. We should like to get the seed land ploughed for Wheat, a stale furrow being so desirable; but though ploughing is possible, it cannot, candidly speaking, be done in a satisfactory manner. The ground is hard, and where it is at all stony the plough cannot be kept at a uniform depth. The work must therefore be deferred. Some farmers having finished cultivating their stubbles are breaking up their seeds in the same way. Where there is any suspicion of foulness from twitch this is an excellent plan, as in weather like the present the noxious roots may be reduced to a harmless state. In any case the breaking up before ploughing will make the latter easier, besides making the ultimate result a much more solid and satisfactory seed bed. The sod may be worked about and killed, but must not be removed, as it represents considerable manurial value.

For winter Tares, which may be sown immediately, a good manuring is necessary. The recently cleared Wheat or Oat stubble will have been thoroughly cultivated and cleaned; it must now have a dressing of at least twelve loads of good old rotten muck. All winter Tares should be drilled before October 10th. If left until later they are longer in germinating, and therefore more liable to damage by birds, especially when sown, as they often are, in small patches. Both rooks and pigeons have a great partiality for seed Tares. Do not mix Rye and Tares, they are not fit for growing together. Either the Rye will be too old and woody, or the Tares too washy. Sow them separately, and use the Rye first. If a mixture is desired the Tares should be given at least a month's start.

Men are still occasionally seen working amongst Turnips. The necessary weeding cannot have been easy work, for the tops had got covered in. As we expected, the grumbles about a poor root prospect have quite ceased. A few bare places are to be seen, but generally speaking crops will be good. Early food will, however, be scarce, for the failures were chiefly amongst the early sown plots. We have more than a suspicion that mistaken economy in the matter of seed has had an influence in such failures. Seed was dear, and good new samples scarce, and in May we several times heard farmers express indifference as to newness and quality, but a determination not to exceed a certain price. They risk a whole crop for the sake of a few shillings.

Workmen's Compensation Act, 1900.—This Act is "An Act to extend the benefits of the Workmen's Compensation Act, 1897, to Workmen in Agriculture." A "handy guide" to the above Act, with explanatory notes, has been prepared in neat booklet form by Mr. John Griffiths, solicitor, which is on sale at the price of 6d. Farmers and others having workmen in their employ must necessarily become acquainted with an Act so full of consequences to them. This "handy guide" attempts to elucidate the provisions of this Act, and lay bare all facts in a simple and easily understood manner. Other references to the Act are difficult to obtain, which makes this pamphlet the more valuable.



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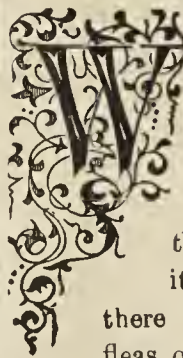
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Journal of Horticulture

THURSDAY, SEPTEMBER 19, 1901.

Beetles on the Tramp.



WE do not expect the gardener of average education to exhibit a large amount of entomological knowledge, but he can mostly distinguish a beetle from other insects, though he may not be able to give its specific name. Some few beetles there are, indeed, that have been called fleas or flies, names probably suggested by their small size and powers of jumping or flying. Such are the Halticas, which infest our Turnips, and Hops at times, seeming rather flea-like; possibly some of the flat, rotund weevils, the Sitonas, for instance, too partial to our Peas and Beans, may have been regarded as bugs across the Atlantic, indeed most beetles are bugs. From the days of Shakespeare, or before, the popular idea of the tribe is one of insects accustomed to walk or run upon the earth, therefore ever in peril of being crushed. Gardeners are constantly coming across beetles in the soil or amongst the stems of plants on its surface, also sometimes ascending their foliage, or secreted within flowers, capsules, and pods, perhaps exercising their jaws in doing mischief.

Many beetles have wings that enable them to fly with fair rapidity, but they appear to make little use of them unless compelled, preferring to crawl. Some species, familiar to us on the wing, have, seemingly, a difficulty in steering clear of obstacles, and, if down, have trouble in starting again. This is the case with the common cockchafer, the grub of which does us notable injury, and the more noisy dor, shard-born beetle, or drowsy watchman, frequent at dusk about gardens and fields, occasionally on the wing in daylight. But according to some its old name was "lousy watchman," because the under side of the body is the abode of parasites. It is not pleasant to have a dor-fly in one's face, yet the species is, from its habits, serviceable to horticulture, aiding in the decomposition of substances which then make

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valuable manure. We have, however, a tribe of beetles that never fly, for the very good reason they possess no wings; and, as they have not the power of leaping, all they can do is to walk or run; some are tardy in their movements, others manage to put on speed.

Sombre tints are suited to insects whose life is mostly upon the earth, and dull-coloured ground beetles are numerous, but a few have bright metallic elytra, which glitter in the sun, hence the name of sunshiners given to them by some country folks. Seeing one of these is accounted a token of good luck, and to injure one purposely is likely to bring misfortune upon the offender, so they say. Possibly, in the larval state, a few species may gnaw succulent roots, but as beetles, till a short time ago, the ground tribe would have received excellent testimonials from gardeners. Known to be predatory, they had the credit of destroying various insects reckoned to be garden pests. But unfortunately several gardeners found a species that they familiarly called "black bob" feasting on their Strawberries, and later investigations proved that other kindred species were offenders similarly.

The carabi are large and active ground beetles, and occur not only in fields and gardens, but about our houses also, where they prey upon cockroaches, or even upon the agile cricket. French gardeners discovered long ago how useful such beetles are, and they not only refrained from killing them, but brought them into gardens when they found them abroad. These beetles are rather night insects than day ones, yet they may be noticed at all hours. Having sharp eyes, the carabi are able to see their prey some distance off. They have the peculiarity, several of them, of discharging from the mouth an offensive fluid as one means of defence, and it can be thrown forcibly. While in the larval stage these species are also predatory; living underground, they are only observed occasionally.

The violet ground beetle (*C. violaceus*) is a handsome and common species, showing purplish tints on the thorax and wing cases. It is not unusual in gardens, however, to come upon a specimen surrounded by ants, yet not dead, and it would appear that these fierce little insects, relying upon their numbers, attack these beetles, also others as big, when they are getting enfeebled by old age. Another species, less abundant here, but more beautiful, is the bright coloured *C. auratus*; on the Continent it is very familiar, getting the local name of the "gardener," and, oddly, the "sempstress," too. Rapid in movement, and with strong mandibles for biting, insects much larger become its victims, and this carabus is a notable killer of the cockchafer during its mature season, which tends to reduce the numbers of its annoying grub. Some of the ground beetles have been mistaken for glow-worms, as looking luminous slightly, the fact being that they get upon their bodies at times phosphorescent particles of decaying matter that they have been wandering amongst or eating. On the banks of several rivers, especially along the Thames, occurs a curious ground beetle called the bombardier. It has the power of discharging at any enemy puffs of bluish vapour with a crackling sound. Along garden paths, and even upon the pavements, by day or night tramp many of the species of *Harpalus*, doubtless in search of smaller insects that afford them food; some of them also seize little worms and slugs. Professor Westwood states that the lighter coloured species are generally abroad during the day; sun beetles, or sunshiners, and the dingy species, sometimes called "imps," go out hunting by night. Often we discover these ground beetles under stones and logs of wood, making us wonder how they got there, usually in the midst of prey. Owing to the habit many have of only sucking the juices of their victims, they destroy more insects than we might suppose; and the larval stage probably lasts several months, when they are also living on insects, at least with few exceptions.

It was about the year 1880, I think, that the first accounts appeared of beetle depredators of a new sort which were committing much damage in Strawberry beds. Sussex appears to have been the county responsible for the name of "black bob;" this, people say, is the property of *Harpalus ruficornis*, which has had fellow sinners in *Pterostichus madidus*, and also some of the species of *Amara*. Most of these beetles kept well out of view during daylight, also their usual habits dispelled suspicion. Of course it was well known that the black

Vine weevil, *Otiorhynchus sulcatus*, at times injured the fruit of Strawberries, as well as committing damage at their roots. Entomologists speculated why such species chose unwonted food, suggesting the cause might be a scarcity of their customary prey, but to gardeners the pressing question was how they should be exterminated. Slates and boards were laid as traps, successful, only the beetles escaped before they could be killed, and the most effectual proved to be drain pipes loosely filled with hay. Out of these they could be shaken into boiling water, and many hundreds were secured in this way.

Something must be said briefly about the rove beetles, or cocktails, insects frequently to be seen on the tramp, and which hold a place amongst the friends of horticulture. Active wanderers they certainly are, and the second name points to the propensity some have of raising the tail or hind extremity, if alarmed or angry. It is by the aid of this tail that the rove beetles pack their largish wings into the small cases. Also, from it several species can eject a liquid which has a most offensive smell. Both in the larval and mature state they kill insects, worms, slugs, and occasionally eat decaying fungi. One of the notable species is the black fellow oddly called the "devil's coach-horse," and *Goerius olens*, travels along paths with a defiant air, quite ready to attack either hand or stick that may approach him. Another of the rove beetles, *Ocypus fuscus*, rather less, is thickly clad with short hairs, and looks like a bumble bee that had lost its wings.—
ENTOMOLOGIST.

Ixias and Sparaxis.

BOTH genera are peculiarly elegant and brilliant, while for vase decoration, as cut flowers, we need only cast an eye over the illustrations on the opposite page to recall their effectiveness to memory. Though the bulbs or corms are small, yet the long racemes of gaily coloured flowers are lengthy and well set with blooms. As a rule these subjects are cultivated in pots, but in all the milder parts of the southern counties, or south of the Thames we may say, both *Ixias* and *Sparaxis* succeed and flower freely in the open borders. In masses they are splendidly effective, and are much prized by all who have successfully established them. By Messrs. Webb & Son's courtesy we are enabled to present the accompanying illustrations, and they admirably serve to show how best to arrange these graceful flowers. We direct attention for further notes to the article on "Miscellaneous Bulbs."

Daffodils in Scotland.

Daffodils in Scotland, as elsewhere, exhibit marked dislikes and preferences to certain soils and positions. Such free growers as Sir Watkin, Emperor, Horsfieldi, common incomparabilis, and the various forms of poeticus, seem to do more or less satisfactorily under all conditions. The "pseudo" are not nearly so dependable, in light soils often failing to produce bloom. One of the most petted of Daffodils is the old Van Sion, which in Parkinson's time was called "Mr. Wilmer's Great Double," but raised by "Vincent Sion, dwelling on Banke Side," who first flowered it in "the yeare 1610." Here and there we find it growing with great vigour, flowering profusely, and "increaseth as well as any other Daffodil." In other places it simply dwindles away and dies off in the course of a very few years. In the same way the very scarce *Narcissus cernuus plenus* has almost totally disappeared from gardens during the last ten years. I still possess a few bulbs, but they do not increase, and with the arrival of each succeeding "moon of Daffodils" their appearance is looked for with much expectancy, and not always with hope. It appears to be a form that requires much warmth, with moisture at root, and plenty of feeding, the latter to be provided solely by means of surface dressings applied early in the spring of each year. *N. maximus* again possesses an infinite capacity for dying without any apparent reason. Mr. Cowan, who grows it exceedingly well, considers the Dutch form to be quite distinct as regards constitution from the Irish *N. maximus*, which he grows solely. *J. B. Berkely* is, however, a good substitute for *maximus*, and is free of the constitutional weaknesses of that sort.

Of the newer forms of trumpets, Shakespeare promises well, and King Alfred bids fair to become one of the grandest forms, though



IXIAS.

its high price must for some years preclude it from cultivation by others than Narcissus specialists. Weardale Perfection is perhaps less to be relied on, and is not so fine a form. Glory of Leiden, now comparatively cheap, is a strong grower and increases freely. The bloom, however, is not without a coarseness that will relegate it to market work, for which it has already entered on its career, rather than for garden culture. The lovely Madame de Graaff also has reached a price within the reach of most lovers of flowers. It, however, cannot be accepted as an easy grown variety, as in some soils the bulbs dwindle in size, and the blooms when produced become reduced in a corresponding manner. Dressings of phosphatic manures are most helpful in keeping up the stamina of healthy bulbs, and in restoring those that have become weakened. Though much smaller, the distinctively pretty Princess Ida is making way for itself, being at once free to bloom, hardy, and not slow of increase. To watch the gradations of colouring day by day in this charming flower constitutes one of the little pleasures of the time of the Daffodils. Space does not admit for a more lengthened review of the trumpet section, but before passing on to others I may note the value of the improved form of princeps, not so good as Emperor and other giants, but still a sort that should be introduced into all gardens where Daffodils are largely grown.

Next in importance, the incomparabilis section waits for a short note. This comprises the Old Nonsuch Narcisse, and is a deservedly popular section. The plants in the highest degree require good cultivation, which includes removal and replanting at shortened periods, in a somewhat strong soil, with heavy manurial dressings annually, applied in early spring, and, very particularly, a clear space for each plant to develop. Even with these advantages some of the kinds are really difficult to keep on light soils, the lovely rose-flowered double sulphur being the least easy of all to preserve and to grow freely. Princess Mary is another sort that sometimes exhibits a great disinclination to grow satisfactorily; King of the Netherlands, on the other hand, seems one likely to do well, as also Beauty, a strong and lusty sort, and Queen Sophia is also good. Lulworth, though of a healthy growth, is rather disappointing when in bloom; the cup seems to me out of all proportion to the perianth.

Of the Leeds section there is no more satisfactory sort than Minnie Hume. The flower is well known for its beauty, and as a plant none succeeds better. Mrs. Langtry possesses equally good qualities, growing well and increasing rapidly. Katherine Spurrell, on the other hand, is disappointing in its growth, and several others cannot be depended on to grow and bloom freely. Barri conspicuus is undoubtedly the finest of that section, and one of the best kinds of all. Of the

Burbidgei section Vanessa can be recommended, as it is one of the latest to bloom. The poeticus Narcissi are best represented by ornatus, recurvus, and plenus, the old double white. The whole of these require high cultivation, and transplanting at comparatively short intervals of time, the single sorts failing to flower when left too long in clumps, and the double form producing deformed blooms, or else they perish in the sheath and do not expand.

A vast number of Narcissi are now cultivated in Scotland for forcing purposes, the bulbs requiring a rest of three to four years before they can be again forced. Under the best conditions I do not think that our bulbs can compete in quality with those grown in Holland for forcing. At the same time, they form fairly good material for ordinary purposes of house decoration.

Many of the sorts produce much finer blooms grown in grass land than they do in cultivated soil, but they increase less rapidly. Several thousands of the double white, planted in grass seven years ago, have gone on improving ever since, and still have plenty of room, while another batch planted at the same time in cultivated ground became so closely crushed with bulbs as to largely fail last year to produce perfect flowers. These were lifted, sorted, and replanted in the same ground in August, 1900, with the aid of superphosphate as a manure and a dressing of compost in spring, with the result that few failed to bloom satisfactorily in the past season.

The present summer I lifted another batch, treating them in exactly the same manner, with the difference that the work was carried out directly the foliage yellowed. Even then new roots were being largely produced. I mention these instances to show how amenable to culture even such an easily checked form as the double poeticus is. Generally speaking, most people would feel very dubious about replanting on the same spot, but they do not resent that, given sufficient applications of food and space for the roots to work in. Exactly the same conditions are seen with us in borders where mixed plants are arranged for effect, and in which many clumps of Narcissi, widely planted, do well every year, though the ground they occupy is filled with summer and autumn flowering subjects after the Narcissi have flowered. Sufficient manure in this instance, too, is the chief item in the management.—B.



SPARAXIS.

A Chat About Lilies.*

THIS most beautiful genus requires no praise from me; their distinctive elegance, charming colours, and, in many cases, agreeable fragrance, combined with great diversity of character, has proved eulogy enough to insure some member or other of this great family being found in every garden. Where the proper treatment is afforded they frequently become the show plants of the garden. Nor is it difficult to succeed with the majority of the species, if only a little thought is given from time to time, and that the best available spot is chosen with reference to the requirements of the particular plant.

We have Lilies sent us from the sometime parched valleys and plains of California; from the swamps of Canada and nooks in the Rockies; from India, Burmah, Siberia, China, and Japan; whilst some few are indigenous to Europe. When these different and so widely distributed habitats are considered, it is not too much to ask cultivators to remember that whilst one form luxuriates in the open sunshine another will only be really happy when partially shaded. And, again, by long cultivation many sorts will grow in ordinary garden soil in the herbaceous border or in special beds, with little or no attention after planting, having adapted themselves to the changes with great readiness, whilst some, more fastidious, will not readily break their generations of customs.

Now to examine some typical cases in this connection, and we shall perhaps see more clearly how easy it is to give something equivalent to what is missing; not that we can bring natural conditions to them, but imitate it as nearly as possible. Half of the failures which annually occur in trying to establish Lilies might be avoided if a little more thought were used in the starting, both as to position and planting. As an instance, the noble *L. giganteum*, whose dimensions when quite at home often exceed 10 feet in height with leaves a foot or more across, producing as many as twenty large flowers. This splendid plant is found growing in valleys amongst the Himalayas at an altitude of over 5000 feet, amongst brushwood and dwarf trees, in a mixture of decayed vegetable matter mixed with the washings from the surrounding mountains, and having abundant moisture, whilst the root is screened from the powerful rays of the sun by the overhanging boughs. Select a damp spot where plenty of drainage can be assured, take out 2 to 3 feet of the soil, break up the bottom and mix with it a third of its bulk, composed of well decayed leaf mould, loam, and sharp grit or coarse silver sand; fill the hole with this and press firmly till the mass is sunken

10 inches or so, when the bulbs can be placed on the top, having a handful of pure grit under the bulb. Now fill in with the remainder of the compost, treading fairly hard, but not too much so, leaving the surface a very little sunken. The position chosen should be where the sun's rays are broken by adjacent shrubs, a nook cut out of a shrubbery answers admirably. Then we have a site equal to the position they themselves would have chosen, so that when once established they will rival their relatives still growing at home in the mountains.

Then there are varieties which need absolutely no special culture or position, provided they get a sufficiency of moisture. *L. lancifolium*, and most of the forms; *L. croceum*, *L. elegans*, *L. tigrinum*, all the forms, *L. candidum*, all will grow well where a Cabbage or common annual will grow. Should they have their roots shaded by other plants, but not crowded out, they will be all the finer when flowering, otherwise full sunshine suits them very well. Not so the elegant and graceful *L. canadense*, and its allies *pardalinum* and *parvum*; these, when found naturally, are growing in close vicinity to brooks and streams in swampy soil composed mainly of vegetable matter, and entwined in the thick masses of other swamp-loving plants; here they are found in large groups, sometimes many yards in extent, plainly telling us that to be happy in gardens a shady position and plenty of moisture must be found for them, combined with perfect drainage. *Lilium auratum*, when growing naturally, is generally found in black volcanic earth on hill sides, thus insuring perfect drainage, so that under cultivation a somewhat drier site should be selected than in the case of *L. canadense*, and shade to the roots, which is so very essential to most other Lilies as well as this, being afforded by the coarse grass, dwarf Bamboos, and dwarfed shrubs of the locality. This may be substituted by planting dwarf shrubs near and amongst them, such as *Rhododendrons*, *Azaleas*, *Berberis* of the neater kinds, &c.

Most Lilies are found in what is equivalent to one of these three

natural conditions, and when in planting them it is determined to which group they belong, their successful cultivation will be considerably helped. I now take the most useful in a general way, and for the purpose of establishing in the garden call that group No. I., and for all practical purposes the same treatment will suffice for all the members of it. This will include amongst others the species *elegans*. About twenty forms of it are in commerce, varying from apricot, gold, to crimson, and having umbels of erect showy flowers growing vigorously in ordinary soil from 1½ to 2½ feet in height. *L. davuricum* is somewhat in this way, growing somewhat taller, the family containing over a dozen distinct forms. *L. lancifolium* or *speciosum*, a well known species grown very largely by market growers, and containing some fine forms, the best of which are *album Krætzeri*, *album*, and *rubrum*; the older white form is also a good variety



DICHORISANDRA THYRSIFLORA.

* An essay delivered before the Shirley Gardeners' Mutual Improvement Association by Mr. B. Ladhams of Shirley Nurseries, Southampton.

to easily establish. Three or four forms of *L. candidum* must not be omitted. The better these are tilled and cared for the more free they keep from the devastating fungus now so common in this species, brought about mainly from uncleanness. *L. longiflorum*, the type, can also be successfully established in ordinary soil, but can be improved if slightly protected when the young growths appear, which is usually very early in the spring. *L. japonicum* Browni I have also succeeded in growing in open beds without protection of any kind, and in ordinary garden soil. It is a very handsome, choice, bold looking Lily. The yellow *L. Szovitzianum* is also an easy plant to establish, and where shade is afforded by other plants it reaches 4 feet, and has a very graceful, and even noble appearance.

(To be continued.)

Irises.

SPANISH and English Irises are here represented. The earliest of the Iris family to open out upon a cold and comfortless world are the Iris reticulata varieties, and Iris persica, I. Heldreichi, pumila, and orchoides. These are not long past before the bold and handsome German Irises come in substitution, and even while these are in flower the Spanish and the English rivals are brilliant everywhere. These "poor man's Orchids" delight in a sunny soil, light and free if possible, but the aspect must be sunny if the greatest success is to be secured. We think their culture ought to be much more extended; we want to see them in as great luxuriance as are some of the Daffodils in spring. Where they have not been tried (though we can scarcely imagine a garden without them), perhaps a selection can be chosen for this autumn's planting. Some of the best varieties noted in such collections as Messrs. J. Veitch and Sons', for instance, shown at metropolitan exhibitions, are Chrysolora, Jupiter, Mont Blanc, Canary Bird, and Garibaldi in the Spanish section, and Charles Dickens, Harlequin, La Grandesse, Prince Imperial, Cleopatra, &c., amongst English Irises. The illustration of Messrs. Veitch shows a truss of Irises, reduced.

End of a Giant Oak.—"Thwaite's Oak," the finest in Norfolk, measuring over 21 feet in circumference, was sold at Tivetshall, Norfolk, last week. The trunk is about 19 feet long, and alone fetched £44. Many of the principal arms were as large as a big tree. The amount produced by the whole tree was £72, exclusive of some £20 previously obtained by the sale of bark, chips, &c.

Jottings on Pines.

Suckers.—Those recently started should be raised near the glass as soon as the roots are plentifully made, so as to secure a sturdy thoroughly solidified growth, especially in plants to be wintered in small pots. When the suckers become well rooted transfer the

strongest, started late in summer, to the fruiting pots at once, draining these well. Employ the fibrous part only of sound turfy loam, in lumps proportioned to the size of the pots. Jamaicas are apt to become weak and attenuated in growth when grown in large pots; 9 or 10-inch pots suffice for them, and they must not be grown away from the glass, or be kept very moist and close. Queens succeed in 10-inch pots, or very strong plants may be given a little more root space, say 11-inch pots. Envoies have all their requirements as regards soil supplied in 10-inch pots.

Smooth-leaved Cayennes succeed in 10-inch pots, 11-inch at most; and Providence in 11 or 12-inch pots. The small plants should be shifted into 7 or 8-inch pots, in which they must be kept until spring. Plunge the pots in a bottom heat of 90° to 95°, in which they must be continued until the roots have taken freely to the fresh compost, when they may be raised, a temperature of 85° being afterwards sufficient.

Growing Stock.—Young plants require free ventilation on all favourable occasions to keep them in a healthy sturdy condition, maintaining a night temperature of 60° to 65°, with 5° to 10° more by day artificially unless dull and cold, and keep at 80° to 85° from sun heat. Ventilate early in the day, so as not to lower the temperature, keeping the bottom heat steady at 80°. Water the plants whenever they require it, employing weak and tepid liquid manure. Avoid the use of the syringe too frequently, as sprinkling the plants has a weakening effect; suffice to damp the paths in the morning and afternoon in all but very bright weather. Fruiting plants should have a night temperature of 70°, with 80° to 90° by day, closing at 85°.—PRACTICE.



ENGLISH AND SPANISH IRISES.

Dichorisandra thyrsiflora.—Seldom, now-a-days, do we rejoice in the sight of this handsome Brazilian perennial with its thyrsus of rich, dark blue flowers, whose yellow anthers contrast so pleasing. *D. thyrsiflora* is surely the prettiest species in the genus. As a stove plant it surpasses in decorative value many of more recent introduction, that entail considerably more care and attention to obtain them in good condition. The flowers are generally thrown up profusely, and certainly the plant is a speedy grower. The inflorescences are compact, and frequently six or seven inches in length, the sheathing leaves being broad and of a dark green colour. There is no absolute need to confine the plant to strict stove treatment; during summer an unheated conservatory will do.

Anemones.

UNDER such a laconic title, a treatment of the whole genus might justifiably be entered upon; only, that is not our present purpose.

The lovely representation of a truss of the Giant French Anemones shown above was furnished by Messrs. Sutton and Sons, and depicts in a very lucid manner the handsome proportions and bold effectiveness of these spring flowers. Until one sees them tastefully arranged in a spray like this, it may not dawn on our minds that such flowers are so beautiful as we here see them to be. These "Giant French," we understand, are varieties of *Anemone coronaria*, and are potted-up largely at this season for early spring decorative uses. Or they are planted in well-sheltered, sunny borders, and even in grass. The scarlet Windflower, *A. fulgens*, is, however, much more commendable for planting in grassy grounds, and the Pasque Flower, *A. Pulsatilla*, has, perhaps, the greatest effect in borders, excepting, of course, such as the Apennine Anemone, also *Robinsoniana*, *Hepatica*, and *nemorosa*. The Dutch and French Anemones are usually more carefully cultivated, however, than those we have just named, and

this is chiefly because the latter are so large, so brilliant, and so conspicuous. The genus is varied, and includes a number of our best prized dwarf-hardy flowers, not omitting, of course, the taller Japanese Anemones.

Disease in Bulbs.

THERE are many diseases incidental to bulbs. Of those caused by fungous plants there is the Japan Lily disease (*Rhizopus necans*), which sometimes ruins the Lily bulbs—*Lilium auratum* and *L. speciosum*—raised in Japan for exportation to Europe. There is the *Sclerotinia* (*S. tuberosa*), that plays havoc with cultivated species of Anemones as well as the Wood Anemone (*A. nemorosa*). Drooping disease of Pæonies (*Sclerotinia pæoniæ*), causing healthy looking plants to become limp some time before the period of blooming, the stem to droop, and the plant to die in a few days. Tulip mould (*Sclerotinia parasitica*) often kills cultivated Tulips in, and above ground. Snowdrop mildew (*Sclerotinia galanthina*), that seizes on the bulb, causing leaves and flowers to be so affected by the conidial stage (*Botrytis galanthina*) that they do not develop properly. Lily disease (*Sclerotinia* sp.) not unfrequently causes the collapse of the leaves of the White Lily (*Lilium candidum*). Colchicum smut (*Urocystis colchici*) destroys the leaves of Colchicum (*C. autumnale*), and another smut (*Uromyces colchici*) levels the foliage of Colchicum *speciosum*, and attacks *C. bavaricum* and *C. autumnale*. Irises, Freesias, Antholyzas, and Hemerocallis sometimes have their leaves disfigured or killed by spot disease (*Heterosporium gracile*). Iris bulb scab (*Mystrosporium adustum*) occasionally sweeps off the bulbous Irises especially *Iris reticulata* bulbs. Clivia leaf blotch (*Chætostroma cliviæ*) collapses the leaves of Clivias. Hyacinth bacteriosis (*Bacterium hyacinthi*) attacks the resting bulbs of Hyacinths, and produces yellow spots on them and the leaves. And, lastly (for I may go on indefinitely in respect of fungous diseases), there is basal-rot of Daffodils (*Bacterium Narcissi*), which is often aided by blue-mould (*Penicillium glaucum*) passed from saprophytic to a parasitic mode of life, and not unfrequently abetted by the maggots of the St. Mark's fly (*Bibio Marci*).

Of animal pests, mention may be made of the Narcissus fly (*Merodon clavipes*), often found as a maggot in imported bulbs of Narcissus and Daffodil. The wireworm (*Elatér lineatus*), with other allied grubs, frequently plays havoc with roots and even bulbs of some bulbous plants. Then there are root mites, nasty things on human flesh, and not uncommon on Hyacinth and other bulbs, feeding on and between the scales, and even on those without scales, such as corms of Gladioli. It, *Rhizoglyphus echinopus*, is the cause of more bulbs dwindling and dying off than is generally credited. Whiteworm (*Enchytræus parvulus*) sucks the roots, causing decay. Eelworm (*Tylenchus devastatrix* and *T. obtusus*) are not difficult to find in the case of sickly looking bulbous plants, for the roots are more or less decayed, and the pests at least help forward, if not actually cause, the resolution of living, into dead matter. Enough, Nature has her "eye" on the weaklings and fatlings, and it is only the progressives in sturdiness and resistiveness that are able to contend with the scavengers successfully. This may appear an old phase of predisposition, but I hold that soil conditions and surrounding circumstances come not within this category, for the apparently healthy, neither weakly nor soggy, are liable to infection, it being only a question of degree, and that the only palliative is to be found in repressive measures, for surely no cultivator would



Giant French
Anemones.

Amaryllis Belladonna.—Every autumn several borders at Kew are charming sights, by reason of the flowering of the above plant, the delicate blending of the pink and white of the flowers making it a general favourite. The vigorous way in which it grows in these borders proves it to be quite at home. The borders are narrow, and extend along the walls of warm houses, consequently the soil, which is light loam, is kept warm and dry from the heat of the wall. At Kew, in addition to the type, a variety known as *A. B. kewensis* is grown. It differs from the species by reason of its longer and stronger flower scapes, and its correspondingly larger umbels of flowers.—K.

expect health in his bulbs without having regard to a clean stock, proper soil preparation, and a suitable situation.

Preventives.

In this place I can only treat of general preventives, and these as respects the bulbs and soil. Inquiries on any particular needs and special ailments must be addressed to the Editor, accompanied, in the case of the latter, by diseased specimens and a few notes, so that they may be examined and duly reported on in "our Journal."

First, then, as to the bulbs. I may say that I entirely exonerate growers of bulbs for sale from all blame if these do not turn out satisfactory, for what tradesman would knowingly supply a diseased article? Nevertheless, the germs of disease may be on the bulbs as spores, or even within the tissues, as latent plasma, or mycelium. The microscope often fails to enable the pathologist to discover the disease lurking in the tissues, especially when of a symbiotic nature, leading up to a parasitic mode of life. Who, then, can tell by the eye, and even pocket lens examination, whether the bulbs are diseased or clean? Certainly bulbs are sometimes visibly diseased; have brown or black, or even white or blue, or pink marks and blotches on them, that needs no particular scrutiny to detect. Such bulbs, especially if marked at the base, should be rejected. This may mean losing a particular variety, and the question arises, Can nothing be done to arrest the disease? This may be; still I hold that stamping out—it is Nature's plan—is the most complete of repressive measure. Burn diseased bulbs.

Disinfecting bulbs is not often practised, but is not its neglect courting disease? Why not submerge them in a 1 per cent. solution of salicylic acid for twenty minutes, and afterwards thoroughly dry them, placing crown downwards, especially in the case of Lilliums? This, or similar treatment with formalin, 1 part in 400 parts water, will destroy the spores of fungi, and any mycelium or plasma reached.

Disinfecting Solutions.

There remain animal pests, such as mites, and possibly eelworms. Why not soak the bulbs in a solution of Little's soluble phenyle, Jeyes' fluid, or lysol, 1 part in 100 parts water, for a quarter of an hour or twenty minutes, and afterwards thoroughly dry them? The treatment for either fungus or animal pests should be performed whilst the bulbs are quite dormant, or as soon after lifting as convenient.

Secondly, the soil must be freed from taint of disease. Do not plant bulbs on ground where they have previously succumbed to disease. A dressing of lime should be given to such land; it wants it. Lime renders other substances more readily available. How seldom is it considered that the lime "eats up" the dead organic matter on which the saprophytic fungi live, and from which not a few acquire a parasitic existence? But cultivators are not content with supplying lime, they must needs supply other plant food. A mixture of air-slaked lime and soot in equal parts by measure, and $\frac{1}{2}$ lb. applied per square yard and pointed in, is a capital dressing for beds cleared of bedding plants, and intended for planting with bulbs. There may be wireworm, especially when an addition of fresh loam is made to the beds, then $\frac{1}{2}$ oz. of mustard dress per square yard dusted on and pointed in will settle them, always applying some time in advance of planting the bulbs.

Another plan for general purposes is to scatter on each square yard of bed for bulb planting, 1 lb. of basic slag phosphate, point it in and sprinkle on the turned up soil 4 ozs. per square yard of kainit, and leaving for the rain or moisture to diffuse into and through the soil. This tells well on both fungus pests and animal depredators. Such dressing implies lime to act on the *débris* of the bedding plants and other organic matter in a dead or decaying state, while supplying phosphoric acid, potash, and magnesia, with not a few other elements essential to the healthy nutrition of the bulbs. There is nothing in any of the substances mentioned that fungi and animals can "eat" to profit themselves until they become organised, and this organised material they must derive from the bulbous plants. It is, therefore an affair of live and let live. The cultivator can dress his bulb beds with manure, the greener the worse, and thus induce disease, not directly (though it may do so), but indirectly, for even if it does not contain spores of fungi or germs of animal pests, it certainly affords a congenial matrix for spores and eggs present in the soil, in which they reproduce themselves rapidly, and the organic matter in the ground passed by their aid and that of other organisms into inorganic elements. They also take to the organised tissues of the bulbs, and who will blame them? Who can change Nature?—G. ABBEY.

Carnations and Pansies.—Now is the season when stocks of these two gaily flowered and uncommonly useful plants are being obtained. We received Messrs. Clibran's select list on Saturday last, and we can recommend all to obtain this very complete and up-to-date little catalogue.

NOTES

NOTICES

Weather in London.—The week has been agreeable for all manner of outdoor exercises, occupations, and pursuits. Saturday and Sunday were both close and warm, but Monday was cold and inclined to be foggy.

Royal Horticultural Society.—The next Fruit and Flower Show of the Royal Horticultural Society will be held on Tuesday, Sept. 24th, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 P.M. A lecture on "Roses for Autumn Blooms" will be given by Mr. Arthur Win. Paul, F.R.H.S., at three o'clock.

Death of Mr. Robert Bowie.—It is our duty to record the death of Mr. Robert Bowie, Wooler, a gardener highly respected in the North of England. He died at the age of eighty-four years. His gardening career began at Chillingham, from whence he went to Walton-on-Thames. On the death of the head gardener at Chillingham Mr. Bowie was appointed to his place, and remained in this situation for the long period of forty-five years; he subsequently became bailiff.

Appointments.—Mr. Malcolm MacDonald, as head gardener to John Spencer, Esq., Kirkwood House, Coatbridge, Lanarkshire, N.B. * * Mr. Chas. King, having retired from the charge of The Gardens, Hillingdon House, Uxbridge, Mr. W. Wooster had been appointed to succeed him as head gardener to Lady Cox at the above place. * * Mr. H. E. Kennedy, as gardener to H. G. Barclay, Esq., Colny Hall, Norwich. * * Mr. A. Rowe as head gardener to Sir Charles Rugge Price, Spring Grove, Richmond, Surrey.

Crystal Palace Fruit Show.—The Royal Horticultural Society's great show of British-grown fruit takes place at the Crystal Palace on Thursday, October 10th, and the two following days. Copies of the prize schedule, with entry form, can be obtained on application to the Secretary, Royal Horticultural Society, 117, Victoria Street, Westminster. Intending exhibitors must give notice in writing not later than Thursday, October 3rd, of the class or classes in which they propose to exhibit, and the amount of space required. On each day of the show, after 10 A.M., Fellows of the Society, on showing their tickets at the turnstile, will be admitted to the Palace free.

Bamboos in Flower.—It is reported that the Bamboo plants are flowering simultaneously, "as if at a word of command," over an unusually large area of Central India. A much greater quantity of seed, which is used for food, will be produced; next year, however, the death of the plants, which invariably follows this act of flowering, will have serious consequences. The Bamboo flowers after a vegetating period of from twenty-five to thirty-five years, and, according to the Chinese, the phenomenon only occurs in a year when the rice crop is unusually heavy, so that there may be compensation for the dying down of this plant of innumerable uses over so extensive a territory. A similar phenomenon was noticed in 1836.

Single Comet Asters.—Attempts have been made to popularise the single form of the China Asters, but the strong predilection entertained by gardeners for the finely developed double varieties militates against the general use of the single form as a decorative agent. Then the single Aster seeds pretty freely, unless, of course, the decaying blossoms are removed. The head of bloom is soon over, as the energies of the plants are otherwise directed to seed production. If the single Aster becomes popular in the garden it will, I think, be mainly on account of the single forms of the Comet type. A large bed of these, such as I recently saw in the trial grounds of Messrs. W. W. Johnson & Sons, Ltd., at Boston, not only displayed a considerable extent of variation in colour, apparently a much wider range than has hitherto been found among the double forms, but what is equally of value, as great a variation in shape, especially on the part of those which may be said to display plumed florets. Many of the florets are also lacinated and feathered, and a vase of these arranged with light and appropriate foliage makes a charming table ornament. The single Comet Asters are well worthy attention, though they have formidable rivals in the fine double types, which are not so formal in appearance as the popular Victoria and Quilled Asters. Some very attractive varieties of Comet Asters have been introduced of late years.—R. DEAN.

Variorum.—Dr. N. L. Britton, Director of the New York Botanical Garden, and Prof. Cowell, Director of the Buffalo Botanical Garden, leave on August 29th on a botanical excursion to St. Kitts and neighbouring islands. They will be absent about six weeks. * * The prospect for a large and bountiful Orange crop in Florida this year is very promising.

Trade Notes.—Messrs. Thos. Green & Son, Ltd., the lawn mower and machine makers, &c., announce that they have been honoured with Royal Warrant. Messrs. Green also announce that owing to the rapid increase of their business they have been compelled to secure greater accommodation for their London establishment, and to that end have acquired a plot of land in Southwark Street, upon which they have already commenced the erection of new premises, and they hope to be in occupation of same by January, 1903.

Agricultural Analysis.—The Essex Technical Instruction Committee have issued a pamphlet entitled "Notes on Agricultural Analysis," by Mr. T. S. Dymond, F.I.C., and Mr. F. Hughes. The report deals with the agricultural analysis made during the past five years, and is published mainly with a view of supplying farmers with information upon agricultural materials, and to supply data with which to compare the guaranteed analyses of manures and foods which are offered them for purchase. It can be obtained from Chelmsford Laboratories.

Canadian Trade Index.—This is the title of a useful publication which has been prepared by the secretary of the Canadian Manufacturers' Association, Toronto, for the use of British, French, and Spanish importers. The "Index" contains the names of some 800 leading manufacturers of Canada, and also contains a brief sketch of the leading export manufactures of Canada. Mr. W. D. Scott, commissioner of the Canadian section, Glasgow Exhibition, will be glad to furnish a copy of this book free of charge to merchants interested in Canadian manufactures, and also offers to answer any inquiries relative to goods that may not be specified in this publication.

Delightful Nectarines.—Sweetmeats in the windows of confectioners, and fruits upon the barrows of the street costers, are two objects for which the average boy or girl consistently yearn, and their elders are not less disposed to gratify the palate with saccharine condiments and fruits in their season. We, at least, are always pleased to partake of good fruit, and on Friday last had the gratification of tasting some of the finest Nectarines that it is possible to receive. A boxful came from Mr. G. Carpenter of West Hall, Byfleet, and if these Nectarines were from the open air, as his Peaches were, then his garden must be favourably situated, and his trees indeed well looked after.

Sir George Douglas on Horticulture.—Sir George Douglas, Bart., of Springwood Park, presided a day or two ago at the dinner held in connection with the annual show of Kelso Horticultural Society, of which he is president. In proposing the toast of "Horticulture, and Prosperity to Kelso Horticultural Society," the chairman said there was one point in particular in which he thought many gardeners failed to make the most of their opportunities. That point was the arrangement, blending, harmonising of colours in the bedded-out flower garden. He did not think, for instance, that it was sufficiently recognised or realised in the profession that in this respect every gardener who in May sets out and plants a flower plot was in truth an artist, wielding a painter's palette of prismatic brilliancy. Only that the means at his disposal far transcended those employed by any artist, for the gardener painted with no dim concocted pigments, but with living light of the all-glorious sun. With such resources at command, did it not behove him to study attentively the attributes and relations of colours, the blending and modification, the enhancing or setting off, by contrast or by shading, of the primary or subsidiary hues? It had only once or twice, or at most five or six times, been his fortune to meet with a gardener who seemed to him to have a very strong or just notion of what he might call a flower's colour value; whilst when he remembered the numbers of gardens he had visited, where the gardener's views of colour harmony seemed to be limited to one trite and hackneyed chord of scarlet Geranium, blue Lobelia, yellow Calceolaria, he felt inclined to blush as red as Lobelia cardinalis, or at least as Vallota purpurea. In conclusion, he exhorted them to apply some part of their time and ability to the study of novelty and harmony in the blending of flower colours.

Pear-scab Fungus.—Attention is called to preventive measures against the above, that are given in answer to a query on page 279.

Shrub with Pendent, Carmine Coloured Fruits.—A correspondent from Harborne, Birmingham, sends a shoot for identification. Names and addresses should always accompany specimens. The shoot is that of *Euonymus latifolius*, bearing its fine crimson fruit in long, drooping, axillary clusters. Only when the male and female plants of *Euonymus* are in juxtaposition can fertile fruits, or seeds at all, be produced.

A Cannibal Tree.—Tropical trees often commit strange freaks, owing to the vigour of their growth under the hot sun and moist air, but we have not heard of a more curious case than that of a mahogany log 4 feet 6 inches in diameter which, on being cut up, was found to contain another log, or rather, trunk, with the bark on it, 18 inches in diameter, inside. Nor is that all; the second trunk enclosed a third stem, a mere sapling with a diameter of about three-quarters of an inch. Both of the two inner stems ran the whole length of the log. The question is, How did the main tree swallow up the two smaller ones as a snake swallows his weaker brethren?

Wasps and Hornets.—One of Bryant & May's "Royal Wax Vesta" boxes came to us on Saturday last. We rather cautiously opened the consignment, this being the season when "these nasty, crawling things" reach us in greatest numbers. It was well for us too, for the box contained a bevy of wasps and hornets, happily, dazed and harmless. A letter within stated that "herewith are sent several specimens of hornets and wasps taken out of the same nest, which was as large as a football. Is it not unusual to find them together?"—C. C. ELLISON. To this we can reply that it is assuredly unusual, and no less an authority than Mr. J. R. S. Clifford remarks that he "has never known or heard of an instance where they occupied the same nests; their habits are so different in several particulars." Yet the box sent to us contained both wasps and hornets. Are there other cases known?

Legal Notes: Did the Trees Overlap?—James Lord, green-grocer, of Kirkley, was charged with maliciously damaging a Poplar tree, to the value of 1s., the property of Geo. R. Manning, engineer, at Kirkley. Mr. E. J. Blake defended. The prosecutor said he had a house and garden in Kirkley Park Road, adjoining some property belonging to the defendant. Witness planted some Poplar trees, and found that out of fifty, thirty-five had been damaged. The centre shoot had been cut. The trees did not overhang the defendant's land, as they always grew upright. Witness saw the defendant deliberately put his hand through the fence and cut off part of the centre stem. He told Lord he had no objection to his cutting any of the trees which overlapped his fences. Sergeant Ruffles said he saw the Poplar trees in the last witness's garden. There was a strong wind blowing at the time, and only a piece of a tree, measuring about 4 inches, overlapped the defendant's property. The centre stem was quite 6 inches from the fence. The defendant was sworn, and said he cut off part of a tree which overlapped his garden. He did not break the stem off. After some discussion the magistrates retired, and upon their return fined defendant 2s., 1s. for the damage done, and 7s. costs.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
September.										
Sunday .. 8	S.S.E.	deg. 63.9	deg. 59.3	deg. 75.2	deg. 47.7	Ins. 0.19	deg. 60.0	deg. 59.3	deg. 58.6	deg. 52.0
Monday.. 9	S.W.	65.5	61.0	70.0	61.1	—	62.3	60.0	58.8	58.2
Tuesday 10	S.W.	56.6	55.8	69.2	50.5	—	61.3	60.3	58.8	44.3
Wed'sday 11	W.	57.9	54.4	61.7	47.3	0.05	60.7	60.5	58.8	40.5
Thursday 12	N.W.	58.1	56.3	65.2	48.3	—	59.2	60.1	58.8	41.8
Friday .. 13	N.N.E.	56.9	54.5	64.0	52.3	—	59.2	59.3	58.7	44.8
Saturday 14	N.N.E.	59.9	54.5	65.7	51.5	—	59.5	59.6	58.7	46.3
MEANS ..		59.8	56.5	67.3	51.2	Total 0.24	60.3	59.9	58.7	46.8

With the exception of a few showers on the 8th and 11th, the weather during the week has been dry and very dull.



Sunflowers.—A Sunflower 13 feet 11½ inches high, with a flower 12 inches across, and leaves 22½ inches across, and the stem 7½ inches round, is surely a giant of its kind.

Freesia refracta alba.—There is no call for remarks regarding this most lovely and odorous of spring bulbous flowers. To look at the tastefully arranged vases of the pure white flowers in the illustration on page 272, from the Wordsley firm, is enough to cause one to envy all who can so successfully grow and arrange this incomparable flower. In some parts of Devonshire Freesias are cultivated in the open air. They are chiefly grown for early forcing, however, and can be had before Christmas. The bulbs must be potted in August for such early work.

Erythronium revolutum Pink Beauty.—Though the Dog's-tooth Violets are panegyrised at great length all the year round, their culture does not meet with such support as that of the true Violets—varieties of *V. odorata*. To obtain the best results the Erythroniums require to be planted 4 or 5 inches deep at the very least. This has been the experience of Mr. William Barr in his nursery at Long Ditton. His firm are now offering the variety Pink Beauty, one of their illustrations of which appears on page 268. It is a profuse bloomer, and one of the best in point of colour that has so far been introduced. "The flowers are large with gracefully reflexing petals, the colour a delicate pink with a central zone of gold." The Dog's-tooth Violet delights in moist soil and shade.

Narcissus maximus and N. Johnstoni Queen of Spain.—Here we have two of the most useful Daffodils it is possible to select, and two, fortunately, that are very much in favour. The former is useful either for forcing in pots, for growing in the grass by the thousand, or equally for cut flower purposes in open beds. Both are yellow trumpet Daffodils. We always regard the latter as one of a half dozen that are peerless in beauty compared against any other variety of the genus. The reflexed perianth lends surpassing grace and piquancy to this variety, and also to the King of Spain. It has been attempted to cross the ordinary trumpet Daffodils and others with these two reflexed varieties, but they seem not to be fertile, at least no success has rewarded hybridisers as yet. The dwarf *N. cyclaminens* gives hopes of transmitting the reflexed perianth character, from trials that have already been made with it. The two varieties we name are figured on page 274, from blocks Messrs. J. Peed & Son of Norwood.

Lilium auratum: a Fine Example.—In the terrace garden of Captain Pentreath, Aubrey Villa, Penzance, a few days ago I noticed a plant of the above with three spikes, bearing 112 nearly all fully expanded blooms, on stems 10 feet 2 inches in height, and 3 inches in circumference. These are from a single bulb planted in the spring of 1897. This appears to be quite a distinct variety; the individual blooms are in character with the growth, being very fine and beautifully marked. A plant just below this one, and planted at the same time, is a good example of the ordinary type. The Morab Gardens, close by, are very attractive, and just now are at their best. Noticeable are the huge bushes of *Hydrangea Hortensia*, with their pale blue and pink blossoms; also very attractive and novel were smaller plants, 1½ foot in height, and bearing from twelve to sixteen blooms, used as a bordering to a shrubbery. Six Tree Ferns, *Dicksonia antarctica*, with 8 feet stems, and plunged in tubs, in a semicircle under the shade of some Elms, gave evidence from their luxuriant growth and fresh appearance that they were perfectly at home. The New Zealand Flax, *Phormium tenax*, as also its variegated form; *Dracænas australis* and *indivisa*, were conspicuous examples amongst many other half-hardy trees, shrubs, and flowering plants, which at all seasons of the year make these gardens so novel and interesting. In and around Penzance are to be found many of the half-hardy trees and shrubs met with in the Scilly Islands, and in most instances have a decided freshness and more luxurions appearance than on the islands. This is to be accounted for by the shelter and protection afforded by the villas or otherwise to which the garden plots are attached. Particularly fine and effective are the Fuchsias, especially so the white petalled forms. —J. AUSTEN.

Freesias.—These should be planted as soon as they are received. They may either be grown in pots (four or five bulbs in a 4-inch pot) or in shallow boxes. No covering of the pots or the bench is necessary after the bulbs are planted. Keep them as near the glass as is convenient, water sparingly until growth starts freely, and avoid a high temperature.

Galanthus Whittallii (Snowdrop).—It is not often that we specially illustrate a species of Snowdrop as we do on page 276 of the present issue. This species (at least we will call it a true species) created more than usual interest when it was shown in the Drill Hall at one of the meetings of the Royal Horticultural Society last spring. As will be seen on referring to the illustration, the foliage is extraordinarily broad and vigorous, and is coloured a rich glaucous green, a point in its favour. The flowers themselves are bold and handsome, and when fully expanded they are very beautiful indeed. Its size and general characteristics render it at once distinctive, and an advance, in this respect, upon nearly all other Snowdrops except, perhaps, *G. Ikarie*. It is recommended by Messrs. Barr & Sons for naturalising in the grass, or for borders.

Narcissi stella superba.—On another page we are provided with a very true illustration of that most beautiful Narcissus named *stella superba*, as photographed by Messrs. Sutton. It is perhaps the finest Narcissus in its section, namely, the *Incomparabilis*, under which are also the well-known *Gloria Mundi*, *Frank Miles*, *Cynosure*, *Gwyther*, *Lucifer*, *Mabel Cowan*, and others. We have often observed how strangers, admiring a group or collection of Narcissus at shows, have almost unfailingly been specially attracted to *N. stella superba*, even when this variety has been huddled amidst numerous others. There is the older type, named simply *Narcissus stella*, but the variety from it is greatly its superior, with flowers more than twice as large. The perianth is clear white, and spreading; the cup is a beautiful showy yellow. Each flower is held up on long stems, a merit which all who require cut flowers for decoration will appreciate.

Lilium nepalense.—A very fine form of this interesting Lily is at the present time flowering in the Himalayan house at Kew. As in *L. Lowi*, a great difference occurs in the size and marking of the flowers. In the plant under notice the flowers are 5 inches across with reflexed perianth, the tips of the segments are greenish-yellow, the remainder being very deep purple, almost black. In addition to this species being of recent introduction, and it not having had time to become well known, its scarcity is in a great measure due to its being rather a difficult one to keep from year to year. Planted in a border indoors of very sandy peat and loam in small groups among *Rhododendrons* as at Kew, it stands a much better chance than when grown in pots, as evidenced by the sturdier growth and finer flowers. The specimens at Kew are now flowering for the second, and in some cases third time in succession without being disturbed, and each time the growth has been stronger and the flowers better than the previous year. The same thing can also be said of other species, *sulphureum* and *auratum* being good cases for illustration.—W. D.

Strawberries in Pots.—Watering the plants must not be neglected, but they are seriously injured by continued needless watering. The varieties intended for early forcing should soon be given the protection of frames, only using the lights in frosty weather and to throw off heavy rains and snow, ventilating freely when the weather is mild, withdrawing the lights when fair, and when wet tilting them. Any plants that have the soil very wet, and remain so for some time without watering, should have the watering seen to. The crowns are often too numerous, not on *La Grosse Sucrée*, but on *Vicomtesse Hericart de Thury*, and some other varieties. Where a number of crowns cluster round the central one, remove the small ones sideways with a wedge-like piece of wood without injuring the central crown or crowns, or the leaves. This will concentrate all the vigour of the plant in the chief crown or crowns, and though there will be fewer trusses of bloom there is no need to fear a deficiency of crop. There is nothing like a loose surface for Strawberries in pots, which prevents the soil leaving the sides of the pots, and admits of the water passing evenly through the ball, moistening the soil thoroughly. A little dried cow manure or horse droppings rubbed through a ¼-inch sieve applied to the surface of the pots will keep all right there. Remove all runners as they appear, also weeds, and do not allow the plants to suffer for want of room, giving them plenty of space for the full exposure of the foliage to light and air, which is essential to a steady growth, and plump well-developed crowns.—G. A.

Gadding and Gathering.

"HERE AWA', THERE AWA'."

Tulips at Long Ditton.

It necessitates some power of imagination to revivify in the mind at this season the impressions of magnificent splendour and the reverberating glow of that indescribable brilliance which fields of Tulip flowers unfold in the sunshine of May. Yet, looking back, the period of intervening time since these beautiful flowers vanished last from sight is but like a night and a day somewhat extended.

And here we are at the opening of another season, one that might in a sense be called the gardener's premier spring; his second spring follows winter! While Tulips are being chosen and shortly to be planted, I have taken the liberty to present a few discursive notes taken on a visit to Messrs. Barr & Sons' sunny grounds at Long Ditton, Surrey, in May last.

Darwin Tulips.

In this section are included all the Tulips that succeed the early ones most commonly grown for bedding purposes. Darwins have gained extraordinary in popularity since the public at large have taken to cultivate Tulips; and perhaps the true breeders of the Florist have lost thereby. The Darwins are mostly self-coloured Tulips, upheld on very lengthy stalks, and possess great vigour. Some of the best varieties are as follows: Glow, a most lovely Tulip, coloured cerise, toned with plum; Dorothy, which resembles Phyllis, the latter being a rosy-lilac shaded with mauve; Maiden's Blush (Krelage) is a beautiful rosy blush variety, becoming well known and always admired. Then, again, Fanny possesses

an elegant form, and is large, being coloured a charming rosy peach; Larton resembles Maiden's Blush. One of the handsomest and grandest of the deep crimson sorts is Sir Joseph Hooker. Cordelia is a deep amaranth on the outside and plum colour within, standing 2 feet high. The variety G. F. Wilson presents nice cup-shaped flowers on tall stalks; the colour is rosy crimson with a dark base. In The Bride the grower has a pale rose Tulip of great sweetness. Pride of Haarlem is another very tall Darwin variety, most brilliant in colour, to wit, a combination of scarlet vermilion; this is of the best that could be chosen. May Queen is specially recommended as a useful and good outdoor Tulip; the colour is soft rose. Edouard André has very large, bold, open flowers of grand shape, and are rose-purple coloured.

In Circe the grower has a peculiar lavender-lilac bloom. Queen of Roses, rosy crimson, and Loveliness, satiny rose, are two gems that greatly please the connoisseur. Auber may be described as a rich mahogany-red, but that is an uncommon combination, and perhaps purplish maroon will better convey an idea of the shade. Pygmalion is a new variety, lilac mauve in colour; Rev. H. Ewbank, of medium height with strong and good flowers, is violet-purple. But it would be wearisome to go on in this catalogue style, especially when a real catalogue can always be had from the Messrs. Barr by asking them. I will name just a few others, and these are Sultan, Mrs. Krelage, Van Poortvliet, Violet Queen, Dorders, and Theodore Jorisen. All of the foregoing are distinct and beautiful.

The Parrot Tulips were also growing robustly in beds and open-air borders at Long Ditton. For their grotesque shapes, lacinated as their petals are, and the wonderful bizarre splashes and combinations of the most brilliant colours shown off by them, one might plead in their favour. In beds, where gardens are warm and sunny, they always furnish a feature of unusual beauty and interest.

Messrs. Barr have also a varied selection of Tulips with variegated

leaves. When the leaves are unmistakably variegated it adds a little to their charm. The species of Tulips are all but unknown throughout the provinces. What flower in April or May is more glorious than Tulipa Greigi or T. retroflexa? Others that are almost equally glorious include Celsiana, Eichleri, Catalini, and suaveolens. Many of the Cottage Tulips are likewise conspicuously brilliant, as, for instance, Bontou d'Or, billietiana, Didieri, Haageri, La Merveille, macrospila, superbly fine; Mrs. Moon, also exquisite, and is, moreover, rare; elegans alba, Faerie Queen, Firebrand, Gesneriana spathulata, together with fulgens, flava, and many that I must perforce omit to name, let alone describe.

Double Tulips.

The double-flowered Tulips are not more suitable for cutting than the single varieties, but they certainly stand longer without shedding their petals. Some of them are exquisitely beautiful, as, for example, El Toreador, La Parfaite, La Grandesse, rosea perfecta, and William III. These are specially beautiful. We have also Murillo, one of the most charmingly sweet of them all; Rex rubrorum, Imperator rubrorum, Couronne de Cerise, alba maxima, La Candeur, L'Innocence, Rose blanche, Tournesol, Tournesol Yellow, Salvator rosa, Vunrbaak, and others. All of these are brilliant and handsome double Tulips. The Messrs. Barr

provide a list of Tulips, arranged according to the harmonies and effectiveness of their colours for bedding. The varieties are single, and are as follows:—Princess Marianne, Ophir d'Or and Wou- verman; Potte- bakker White and Chrysolora; Prince of An- stria, President Lincoln and Chrysolora; Rose Grisdeline and Princess Marianne; Potte- bakker Yel- low and Thomas Moore; Chryso- lora and Dusart; Princess Ida and Rosamundi; Duchesse de Parma and Fa- biola; Rosa- mundi and Rose Superbe; Cou- leur Cardinal



ERYTHRONIUM REVOLUTUM. (See page 267.)

makes a grand show bedded by itself, but Snowdrift goes well with it; Keizerskroon makes a fine bed with Queen Victoria as an outside border.—WANDERING WILLIE.

Attractive Bulbs for Beds.

DISPLAYS of flowering bulbs in flower beds in spring are features worthy of extended attention, as suitable bulbs of various species may now be obtained cheaply, and of good, reliable quality. The beds must necessarily be prepared and planted in autumn, as an early start in rooting while the tops remain dormant for a time goes a long way towards success. Bulbs in general only have a limited time during which they bloom, and in that brief period most of them are exceedingly attractive. Hyacinths may be mentioned first, because for a gorgeous display of stately spikes nothing can surpass them, but they are naturally stiff and heavy in appearance, and unfit for use as cut blooms. The beds may be filled with red, white, and blue varieties separately or in mixture. Reds vary in shade, also the blues, while some whites are purer than others.

Among blues, select Charles Dickens, Czar Peter, Baron Van Tnyll, and Marie; in reds, Amy, Belle Quirine, Gertrude, and Norma; whites may be represented by Alba maxima, Grand Vainqueur, Grand Vedette, Queen Victoria, Mont Blanc, and Grandeur à Merveille. The singles are in all cases the best to cultivate in beds, the doubles as a rule not being nearly so attractive. I advocate planting beds, whether

large or small, of one colour only. The bulbs can be planted in October, well digging but not too freely manuring the beds.

Narcissi take rank as the best of all bulbs for bedding displays. They not only make an imposing and attractive feature in the garden, but the blooms can be cut and employed for various decorative purposes in embellishing vases, bowls, and glasses indoors. In the beds the blooms have a light and graceful appearance, while when cut, with a little of their own foliage arranged with them, they are extremely useful. Beds occupied solely with any of the following varieties are specially good:—Golden Spur, Johnstoni, Queen of Spain, *maximus*, Bicolor Empress, Bicolor Horsfieldi, W. P. Milner, Incomparabilis Sir Watkin and Queen Bess, Leedsi Mrs. Langtry and Minnie Hume, Nelsoni Mrs. Backhouse, Burbidgei John Bain, and Poeticus Poetarum. A bed of the double English Daffodil may be planted, but it is really the best to plant the choicer varieties in beds and leave the commoner sorts for wild positions.

Tulips may be used freely in beds. They are later in blooming than Hyacinths and the majority of Narcissi, but they make a specially welcome feature in the flower garden, and the blooms, like Narcissi, are useful in the flower bowls for general decoration indoors. Place the bulbs 4 to 6 inches apart in deeply dug beds, using one colour only, or several in combination. The following are varieties which bloom at about the same time, all being single:—Artus, brilliant scarlet; Bacchus, dark scarlet; Golden Standard, scarlet, flaked yellow; Keizers Kroon, scarlet and yellow; La Reine, White Swan, Comte de Mirabeau, pure



NARCISSUS STELLA SUPERBA. (See page 257.)

white; Canary Bird, Chrysolora, Yellow Prince, yellow; Cottage Maid, white and rose; Couleur Ponceau, crimson and white; Silver Standard, crimson and white; Proserpine, salmon pink; Thomas Moore, apricot; and Van der Neer, purplish violet.

Crocuses for beds need only be employed as edging in broad or narrow bands or single lines. In the latter case the bulbs may be planted permanently close to the edge of bed, where they need not be disturbed by digging the beds. The yellow, blue, white and striped, are the best in a general way, though some may prefer the named varieties. For small beds the spaces can be filled with *Scilla siberica* or *S. præcox*, both bearing rich blue flowers. Similarly can be employed *Chionodoxa Lucilæ* (Glory of the Snow) which has blue flowers with a white centre. They are all dwarf growers. The spikes of flowers are small, but a mass of them produces a lovely effect. Beds, too, may be filled with *Anemones* in October, following with another batch in March. Plant *Ranunculus* in February.—S.

[Bulbs in Shrub-beries.]—A grand effect may be produced from March to May with Daffodils alone. Hyacinths may be employed in limited quantity unless they are specially required, in which case the choice named varieties may be grown. An attractive display may be had with masses of separate coloured Hyacinths, employing the three principal colours—red, white, and blue. The bulbs of these are cheap, and may remain some time in the ground, throwing up blooms annually. In growing Tulips in these positions the best are those known as May-flowering Tulips, which include Parrots and Darwins.



Autumn Sown Sweet Peas.

Several notes have appeared on this subject. To those living in the southern counties it is not necessary to trouble about sowing in pots, as in ordinary winters they will stand out all right. I sowed four short rows on September 19th, 1900, on well trenched ground, and the result was well worth the extra trouble; we had finer flowers, earlier, and more of them.—R. I.

Large Pears.

It is quite certain that unnaturally large Pears are not so fully flavoured as those of a natural size. In Guernsey we were told by the Chanmontel growers that those weighing from 10 to 15 ozs. were much superior in flavour to those of much larger size. It is the same with the Gooseberry, and probably with all other fruits. The pampered show Gooseberries of Lancashire are infinitely inferior in flavour, not only to the fruit of the smaller-fruited varieties, but to unbloated specimens of the same variety. The bloated berries have been unable to elaborate all the sap forced into them, and, therefore, its watery constituents predominate; for ripening is neither more nor less than converting the watery and gummy parts of the sap into sugar and aroma.—N.

Royal Horticultural Society's Examinations.

Several of your correspondents have referred to the above, and hoping it may interest some of your readers I send an analysis of the Royal Horticultural Society's lists, which will enable us to see something interesting in connection with the candidates who, for convenience of reference, are classified as under:—

	First. Class.	Second Class.	Third Class.	Total.
Private study candidates, mostly gardeners and including Mr. Browne's class of 15 ...	31	40	15	86
Horticultural College, Swanley ...	33	11	2	46
Essex County School of Horticulture ...	8	7	—	15
Reading and Lady Warwick's Hostel ...	11	3	1	15
Oxford City Technical School ...	7	6	2	15
Holmes Chapel Horticultural School ...	3	10	1	14
Other schools and institutes ...	8	2	2	12
Reading College ...	5	2	1	8
Staffs. County Technical Schools ...	3	4	1	8
	109	85	25	219
Failed... ..	...	...	...	6
Total ... ..	...	...	...	225

It is reasonable to suppose that some of the candidates from the various public institutions were gardeners who had been allotted to these centres for examination purposes, as in the writer's experience one fruit farmer of some standing helped to swell the first class list of the college chosen as his centre some time ago.

As the private candidates form nearly 40 per cent. of the total, it is evident the vague general impression that these examinations are attended solely by amateurs is not quite correct, and there is little doubt that as soon as the ruling powers realise how greatly they may help professional gardeners in their home reading and self-improvement some steps will be taken to hold the examinations earlier, and not, as now, in the busiest time of the whole year. At Lady Day so many promotions and changes take place that comparatively large numbers of gardeners find themselves heavily handicapped by the date, if not entirely prevented from attending the examination, and as the best and most intelligent gardeners are the ones to obtain promotion, one grave result is that discredit is brought on this part of the society's work. To students who have been going through a two-years course at a college or school it makes no difference whether the examination be held in February or in April. It is easy to understand that staff and clerical difficulties stand in the way of the needed improvement, but luckily the Royal Horticultural Society is progressing by leaps and bounds financially; and as Rome was not built in a day, we do not despair of finding the society helping practical gardeners in this direction before long. When they do so, the examinations will begin to rank

with those of other large and influential societies, and the power and influence of the Royal Horticultural Society will be correspondingly increased.—PRACTICE WITH SCIENCE.

Seedling Briers.

In answer to "R. W.," one may answer, "Yes, it is usual for seedling Brier stocks to be as uncomfortable and unsatisfactory as he describes them to be." It is quite reasonable that he should give them up, as most rosarians have done before him; but why he should fall back on the Manetti instead of on the most popular and well-known stock, the Brier cutting, which has for the last dozen years at least, by general consent been awarded the first place among dwarf Rose stocks, it is hard to say.—W. R. RAILLEM.

Melon Little Heath.

I, like many others, have grown Little Heath Melon in frames for years, and can speak in its favour. I have an old brick pit with three lights, 4 feet wide and 5 feet long. After being planted with Potatoes, which I lifted the last week of March, I just shook up the bed, which consisted of leaves, and then mixing some short Horse dung to start the heat again, I put in a bushel of soil under each light, and no more, consisting of three parts good loam two years old, and one part of cow dung put in a heap two years ago. I then planted the Melons, which were strong, one under each light. The plants were raised from seed sown in a 48-sized pot, and potted singly as soon as the first rough leaf was produced; after planting they grew such healthy dark green foliage, that my gardening friends told me I should have nothing but leaves. Very soon, however, they set plenty of fruit, and fourteen of these in all on the three plants weighed 56 lbs.; my largest was 5½ lbs. weight. They were all cut by the 16th of August, and now I have the pit planted again with May-sown Cauliflower for late autumn use, with the lights off till protection shall be wanted; thus by Christmas the pit will have done good duty, if I have not.

As regards affording air to Little Heath Melon, I gave them about the same treatment as the Potatoes, which grew in the pit before them, except that in dull days the lights were pushed off back and front to have a free circulation of air from early in the morning until I shut up, and it always fell to their lot to be last.—C. M., Warwick.

Grubs at the Greens.

When I went to school there came occasionally, once a half year or so, an old gentleman to give us a lecture on chemistry. His experiments were, I am afraid, all we cared about. What was to be heard passed unheard by the majority, but what was to be seen attracted all eyes. I regret to say, also, that we delighted in taking pen and ink sketches of the professor in various attitudes; his long nose, spectacles, and pointed chin, were attractive to the caricaturist. But what I want specially to remark upon was, the fact that on chemical lecture days the under masters sat with the boys as learners.

Now, to-day, I wish to sit with the boys. I write, not to inform, but to get information. My Broccoli plants and other subjects of this class have been attacked by a horrible grub, such as I never had the pain to be acquainted with before. I saw one day two or three plants leaning on their sides and looking flagged. On approaching them I found they were all bent severed at the part of the stem just below the surface, on examining which stem I found it was bored like a gun. Pulling up the root I scooped away the earth with my fingers, and, lo! a little way down was the offender—a fat, yellowish-green grub, curled up in a semicircle. I find all my neighbours are suffering similarly, doubtless the dry season is to blame. I saw a large bed of Lettuces reduced to five. Then I hear that Onions, Leeks, and Carrots are also attacked. As to my battalions of Winter Greens, they look as if they were General Botha's battalions cut up by British cannon balls. If you please, I want to be told a remedy for my plants against these pests, for I am tired of finding them and crushing them on the path, as the cry is "Still they come." I do not care about the scientific name of my enemy, possibly it is "Yellowgreenius grubbensis," the product of "Mnsca tormentor gardenarii." These names will suffice for me; but I want to exterminate the foe. Lime water has been tried but has failed. Will you befriend your troubled—RECTOR?

[Though there is no application known which will kill the grubs whilst it does no injury to the plants, yet there might be something sprinkled over the surface of the soil at another season of the year which would prevent the mother depositing her eggs there. However, you do not wish to know the scientific name, and we will merely say that your "yellowgreenius grubbensis" is known to, and characteristically described by gardeners as the "Leather-coat," for a tough-skinned adversary he is. The only remedy is (without intending a pun), to grub round each plant in a bed so soon as you see that one plant in it is attacked.]

September Musings.

IF there was no such thing as a calendar, the garden itself would serve the purpose in marking the passage of time. In September it has a look, peculiar to the month, in some respects a little ragged and dismantled, but bright nevertheless with the flowers of the season. In the air itself there is something significant of the season. Not only are the days shorter, but there is a misty coolness at dawn, which is dispelled as the sun asserts its power. In our part they call such a real Hop-picking morning, because it gives promise of a fine day, and the rustics rejoice in it as they trudge along on their way to the gardens, where the bine is being ruthlessly torn down, and the golden brown trusses of Hops are tugged off by scores of willing fingers, and transferred to the drying oasts; and then in the evening, when the sun has again sunk below the horizon, a misty haze settles once more over the landscape, and the evening air is pervaded with the delicious aroma from the smoke of rubbish fires burning in the cottage gardens round about. It is the season for clearing up, the Potatoes are being lifted and stored, and the withered tops, the Pea haulms, and the old Bean stalks are being reduced to ashes, which are carefully preserved for next season's Onion bed, and in the process of burning that scent is given off which never smells as it does in the twilight of a September evening.

We ruminate at this time of the year—rest on our oars, so to speak, and gather in little groups when we can no longer see to do anything, and compare notes of the difficulties of the past season. With us they have been numerous, and one old stager of some sixty odd years' experience says it has been the queerest season he could ever remember. Ask him why, and he refers to the cold bleak days of spring, when we were anxious to get the ground turned up so that we could make a start, but perpetual rain prevented it. And then later, when we were running through the days when we should have had warm sunshine and intermittent showers, the top crust of soil baked like bricks under the influence of the biting east wind that prevailed through the greater part of May. After that came the drought, which dashed all the hopes of the farmer for hay crops, and threatened failure in the garden. How we sickened of the constant slush, slush of the watering can, and longed for the showers which refused to come. We were mutually agreed that there would be nothing, and that all our efforts would be in vain, and now as the end is approaching, and we have arrived at a time when we can begin to count the results, we are mutually surprised that things have turned out so well.

But what a season it has been for flowers, in spite of the drought, and it is truthfully said in this neighbourhood (Kent) that we had better have too much sunshine than too much wet. As I write the Roses are bright in their second bloom. They are not a tip-top show collection, and not a flower from them has ever graced a show board to my knowledge, but they are just a mixed medley of Teas and H.P.'s, with a climber here and there. Another bright spot is where the Sweet Peas grow. Surely this is a flower to swear by, and no mistake. July was young when they first unfurled their sweet blossoms, and it has been cut, cut, cut ever since. Therein lies the secret too, for Sweet Peas, above all things, must be cut if they are to continue blooming. We worked the ground deeply at the outset, manured liberally, and sowed thinly. Not a drop of water have the plants had since except that which came from the clouds; not because we were niggardly, but water has been a scarce article in these parts all summer, but the Sweet Peas have stood the strain, and the display of bloom on Firefly, Black Knight, Captain of the Blues, Blanche Burpee, and the rest, is nearly as bright as it has been through the summer.

I doubt whether the annuals have ever been better, and how the Asters enjoy the heavy dews of the morning just now! A few went wrong in midsummer, but for the most part they have pulled through, and are making a grand display, and taking the place of the Stocks that have done so well under the tropical sunshine. For brightness of colour and size of flowers the Zinnias surpassed themselves, and in hot summers I question whether we have a more useful annual. There is nothing novel about single Petunias for bedding purposes, but they have acquitted themselves so well that they are deserving of special word. One bed was planted from a packet of mixed seeds, and they have rambled and wandered, but flowering all the time, admired by everybody, and to-day as bright as ever.

By way of conclusion I must muse a little in the orchard, where the harvest of the trees is at hand. Reports are confusing as regards fruit. From some parts we hear that Plums and Apples are scarce, but in others the trees are laden almost to point of breaking. This upsets local calculation, which says that we never get a good crop in two consecutive seasons. Such is the case, however, with some trees, while others seem to support the truth of the old saying by producing nothing. What are commonly known as windfalls are numerous, though the majority of them are not windfalls at all, but the hole at the eye or in the side is evidence of the maggot of the codlin moth.

Amongst the various pest of the Apple none has done so much damage in recent years as this, and the efforts made to checkmate it are few. I think most people are agreed that this is a good Pear year, though the early "Williams" have not been much of a success. Still the later sorts are bearing freely, and there should be no scarcity of luscious fruits at Christmas time. The Cherry season is just over, except the Morellos on the north wall that are hanging for dessert. The little wildling that the cherry brandy is made from has cropped very heavily this year, and the last of the fruits have been picked for preserving. Rarely has the Cherry crop been so good, and at the time when townsfolk were buying a pound of splendid Bigarreaus for a penny, the Kentish grower was bemoaning the low price that the salesman returned him for his fruit. Big prices were paid for orchards at the outset, but I am afraid some of the speculators would never see their money back. Though Plums and Damsons are plentiful in places they are scarce in other districts, and I do not think we shall hear the stories of tons of fruit rotting on the ground that were so common last year.—H.

Bulbs in Grass.

Winter Aconites—Snowdrops—Scillas—Crocuses—Chionodoxas—Narcissi.

THE culture of spring-flowering bulbs in grass is a feature of gardening which might be more extensively carried out. It is not desirable to encourage the planting of even small bulbs on closely shaven lawns, but there are many corners and patches of grass where a good display of common hardy bulbs would prove attractive and interesting, not only for one, but for many seasons, as the majority of bulbs suitable for this purpose could remain in the ground permanently, and they would increase in numbers each succeeding season. The most effective displays are made when the planting is done in comparatively large masses, isolated bulbs or small patches of a few only not giving the effect or bold display which should be associated with this form of culture.

Whatever class of bulbs are planted, it is essential in the first instance to give the ground or position thoroughly good preparation. To do this the grass should be removed in a circle, say not less than 2 feet in diameter, or more if larger masses are required. Take out the top spit of soil and break up that below, adding some decayed manure, leaf soil, and burnt refuse to improve it. If very dry and hard saturate with water before adding any additional materials, which may be mixed with the top spit in filling in the space again. Make the whole firm and level, and then plant the bulbs.

The smaller bulbs may consist of Winter Aconites, Snowdrops, Scillas, Crocuses in separate colours, Chionodoxas, Jonquils, Daffodils of the commoner type, and choicer Narcissi in variety. The common English double Daffodil, *Telamonius plenus*, is the best, and it will flower every season. Other and choicer varieties, showy and distinct in character, are included in the following list of Narcissi suitable for naturalisation:—*Abcissus*, a late flowering trumpet Daffodil; *albicans*, a strong growing trumpet variety; *Achilles*, a rich deep yellow March-flowering trumpet variety. A good early trumpet Daffodil is *Golden Spur*, so also is *obvallaris* (*Tenby Daffodil*), *spurius*, *scobicus*, *pallidus præcox*, and *Princeps*, all trumpet varieties.

For very late flowering, *poeticus ornatus* and the double *Gardenia*-flowered *poeticus* variety are among the best. The *Peerless Daffodils* or *Chalice-cupped Star Narcissi*, which include the *incomparabilis* and *Leedsii* varieties, are excellent for naturalising. Tulips may be used in limited quantities, the late-flowering outdoor varieties being the best for this purpose. Groups of *Dog's-tooth Violets* are pretty and interesting and excellent for establishing permanently in semi-wild positions.

A readier method of planting than the one described may be adopted if the soil is good and comparatively moist. Make holes with a crowbar and enlarge them with a dibber, partially filling them with a mixture of sandy loam and leaf soil, leaving sufficient space to place the bulb at the required depth. Then cover and fill up the hole with the same kind of soil. The bulbs, according to their size, may be planted a few inches apart, and in this manner breadths of any size may be established. The grass should be kept well down during the autumn, but after the bulbs commence growth it ought not to be touched until the flowering is over and the foliage has completely died down.

For culture under large trees or shrubs, whether the ground is covered with grass or not, the bulbs mentioned may be employed. The attention the bulbs appreciate is to supply them with several good soakings of water during the season of growth should the ground be at all dry. Liquid manure will act beneficially after the flowering is over to assist the growth of the leaves and indirectly benefit the flowering the next season.—SOUTHERNER.

Miscellaneous Bulbs.

THOSE familiar bulbous flowers, Tulips, Hyacinths, and Daffodils, are so generally grown that I fear we often overlook the charms of many other delightful flowers which may easily be obtained by planting a few bulbs at a suitable season. September arrives, and we begin to seriously scan the bulb lists to make our final selection of the good things to be ordered; the showy flowers already enumerated are perhaps purchased by the thousand, for experience has taught us they will annually give a brilliant display. We cannot, indeed, dispense with them, but it is well to bear in mind that variety has charms which appeal to all. At no time in the history of gardening has the craze for variety—any flowering plants—been so pronounced as it is to-day, and the most famous gardens are those which are well stocked with flowers, plants, and fruits of varied types. The newest among the new are there associated with old favourites, so that there shall be no lack of interest as well as brilliancy.

In this brief note I will endeavour to give prominence to a few good things often overlooked when bulbs are ordered, but which are generally welcomed when seen in a neighbour's garden. I will not tie myself down to the stern rules which guide the botanist in determining a true bulb, but will include corms and tuberous roots as well. The double and single

French Anemones

ought to be grown in every garden (see the illustration on p. 264), as they are equally well adapted for beds or borders. When grown in the former it is usually necessary to lift the corms and dry them off after flowering; but when clumps are formed in mixed borders they succeed best when left undisturbed for three or four years; by that time they generally need thinning out and re-planting. Rich well-worked soil is necessary, and 6 inches apart and 3 inches in depth are suitable distances to plant. The double scarlet is especially good for beds where spring gardening is an important feature in the flower garden. The well-known *A. fulgens* is also a gem for the same purpose. The giant varieties should be planted somewhat further apart. October and November are the best months to plant. St. Bridget Anemones are fortunately now quite popular, and deservedly so, as when once established they will often flower throughout the autumn and winter months if mild weather prevails. A few years ago I saw a grand row of them in Lord Leigh's fine old gardens at Stoneleigh Abbey, when the late Mr. Beddard had charge there, and I doubt not that under Mr. Martin's care they are equally satisfactory.

Ranunculus.

How seldom one meets with a really good collection of *Ranunculus*, and yet I know of no hardy flowers more strikingly beautiful during April or May. Last spring I admired a fine collection in Lord Willoughby de Broke's garden at Kinton House in Warwickshire. Some of the flowers were like double Begonias, and their tints were quite as novel. I noted down the names of the best, but my notes

often have a knack of disappearing when wanted; they have played me false again. Mr. Hall, the head gardener, informed me that he had no difficulty in growing them, although the soil was naturally stiff, as he mixed old hotbed manure freely with it each year, and after flowering lifted the tubers and dried them thoroughly. Both Persian and Turban varieties are thoroughly worthy of being grown; the latter are the stronger growers.

Tritonias.

Although at the time of writing, *Montbretias* (*Tritonias*) are in full flower, it is not too early to order bulbs, as they are usually delivered during the autumn. I sometimes think that if these elegant "spiky" flowers were choice exotics we should admire them even more than we do now, but they are perfectly hardy, and if planted during autumn or spring in fairly good soil, they soon increase and form a thick mass. In August and September their flowers, when cut, delight the floral decorator, and a mass or clump flowering in the garden is a glorious sight indeed. Equally

suitable also are they for growing in pots. A plan I have often practised is to pot up a number of bulbs during the autumn and plunge them in ashes in the open air. When growth is a few inches in length, remove some of the ashes, so that the rim of the pot is just covered. They can then be left in the open air till the flower spikes appear, then place them under glass. When in flower they are highly attractive for conservatory decoration. After flowering the clumps succeed splendidly if planted in the open air. *Crocsmæflora*, *Eldorado*, *Elegans*, *Transcendant*, *Pottsi*, and *Phare*, vermilion, are all fine varieties. In the beautiful pleasure grounds of C. A. Smith-Ryland, Esq., Barford Hill, near Warwick, there are many fine clumps of *Montbretias*, and yet Mr. R. Jones, the head gardener, is constantly increasing his stock.

Ixias and Irises.

Ixias, how the word brings to our minds visions of slender spikes carrying beautifully marked flowers. By potting up bulbs in 4 and 5-inch pots from October to January a

succession of showy flowers may be obtained. If they are potted in good loam, with a plentiful addition of leaf soil and sharp sand, and are given cool treatment, no difficulty should be experienced in their culture. They also succeed well in the open air in a warm sunny position, if given slight protection during severe frosts.

Spanish Iris have for some years been extremely popular, as their flowers are as showy and beautifully marked as many Orchids, and being borne on long stems they are splendidly adapted for use in a cut state. They succeed well in the open air or when grown in pots, and being exceedingly cheap are within the reach of all. In whatever situation they are grown they should be potted or planted during October or November. When grown in pots they, of course, need plunging like other bulbs, and as soon as growth is a couple of inches in length, if transplanted to a greenhouse or cool pit, they come on steadily, provided they are kept near the glass; if placed far from it they sometimes grow weakly, and fail to flower well. Early batches may be brought on in gentle heat, but they dislike sharp forcing. During bright weather an occasional syringing is of great benefit. The following are all good, distinct varieties:—British Queen, pure



FREESIA REFRACTA ALBA. (See page 267.)

white; Belle Chinoise, golden yellow; Formosa, blue; Leander, deep yellow; Hercules, purple; and La Reconsans, bronze. *Pavonia major* and *Reticulata* are two splendid Japanese Irises, suitable for pot culture.

Tigridias, *Gladioli*, and *Hyacinths*.

Tigridias should find a place in the mixed border of those who pride themselves on the possession of really novel and showy flowers; *conchiflora*, *grandiflora*, *g. alba*, and *Pavonia* are excellent varieties. Plant during November or December. *Gladioli Colvillei* The Bride, is grown extensively both in market and private establishments, as the flowers come in at a time, April and May, when white spiky blooms are not particularly plentiful. When good bulbs are obtained they flower with certainty, but poor samples have during the last few years been offered at very low prices; these have not been satisfactory, and I am convinced that it is sound economy to procure the best possible bulbs of this useful *Gladioli*. The coloured varieties of *Colvillei* are also very showy for pot culture, and splendid for cutting. All varieties should be potted during September or October.

The Grape and Italian *Hyacinths* are useful for growing in pots, as they produce abundance of foliage as well as flowers, and form a good succession to Romans. *Allium neapolitanum* is excellent for planting in the open air or for pot culture. It bears gentle forcing well, and its "starry" white flowers are appreciated during February and March.

Chionodoxa Lucilæ (Glory of the Snow), *Scilla sibirica*, *S. præcox superba*, and *S. bifolia*, are all delightful bulbs to plant as edgings for beds, or in clumps or masses in the mixed border, as the brilliant blue of their flowers is a refreshing change to eyes which during the previous week may often have wandered over lines of golden *Crocus*. When grown in pots they may be had in flower at the same time as *Crocuses*, and if the various blues and yellows are then intermixed in one large pan the whole forms a pleasing feature suitable for room decoration.—D. W.

Societies.

Derby Horticultural, September 11th and 12th.

Beautiful weather and a capital attendance favoured the fortieth annual exhibition of the Derbyshire Agricultural and Horticultural Society. The horticultural section was held, as on the last occasion, in a commodious field near the Meadow Road. The arrangements, under the experienced directorship of the courteous secretaries, Messrs. Sidney Barton and C. F. Steele, and the competent stewards, left little to be desired, but the lacking little resolved itself into one item only, and which is worthy of the consideration of the committee upon future occasions—namely, the addition printed or written on the exhibition cards, the names, not only of the gardeners but those of their employers and their addresses, both in the interests of the visitors and in aid of reporting.

The exhibits were contained in three large marquees. The gigantic circular one was apportioned principally to the groups of plants arranged for effect. As compared with the last show, when there were six exhibits *versus* four on the recent occasion, the deficiency may be attributed to the failure of finding contestants sufficiently courageous to enter the lists against such as the redoubtable Mr. Ward, gardener to G. H. Oakes, Esq., The Riddings, near Derby, and who once again maintained his reputation by securing the premier prize of £20. The space allotted to each competitor was 200 super feet (segments of a circle), the segments radiating from the centre pole, similar to the spokes of a cart wheel, and each measuring about 27 feet long by the same width at the periphery of the circle, the arrangement being refreshing in comparison with the more orthodox ones usually adopted at other large shows. In an æsthetic point of view, however, the strictly formal outline of the segments does not tend to the best advantage for a free artistic exposition of floral decoration, unless, indeed, an undulating outline were requisitioned. The style of arrangement by the other three competitors were mainly replicas of Mr. Ward's original design, consisting of low moss and cork bark banks, discreetly disposed over the allotted space, and each surmounted by specimen ornamental foliage plants, such as *Codæums* (*Crotons*), *Palms*, *Dracænas*, *Bamboos*, *Acalypha*, &c. These specimens were sufficiently elevated to allow of an under arrangement of other suitable plants sprung from the base of the mound, while lightly disposed small plants were worked in here and there over the moss-covered ground-work of the design. Mr. Ward's renowned *Codæums* were in a state of absolute perfection, both in contour and richness in colouration; and three examples of the graceful *C. candatus tortilis*, each about 6 feet high, were marvels of skilful culture. Similar remarks also apply to three examples of *C. Reidi*, and including such as *C. Mrs. Dorman*, *C. aigburthensis*, and *C. ambanivoulensis* (?). Very effective too were

specimens of the charming *Lygodium scandens* trained pillar fashion; and compactly grown examples of the elegant *Arundinaria* (Bamboo) *gracilis*, the foliage being of a bright rich green; the graceful *Eulalia japonica variegata*, *Lilium speciosum lancifolium*, *L. auratum*, *Ixoras*, *Ferns*, and a few *Orchids* and other subjects contributed towards a picture of superlative excellence. The second honours fell to Mr. C. H. Turner (a new aspirant we understand) for a highly creditable composition, similar in arrangement and kind of subjects employed as in the foregoing, but with a greater profusion of *Orchids*. The third prize was accorded Mr. J. S. Sharpe, Huddersfield, who occupied the same position as last year; the fourth prize falling to Mr. George Woodgate, Rolleston, with a rich and striking group, excepting that perhaps an air of heaviness was imparted by an overcrowded disposition of his fine *Codæums*. The interstices between the groups allowed of a single smaller group of *Begonias* in pots, *Ferns* and foliage plants being admissible. These groups served efficiently as a set off to the larger ones. Mr. J. H. Goodacre secured the first prize, Mr. W. B. Bond the second, and Mr. R. B. Tilley the third prize.

Strangely, there was no class for specimen plants; but if the committee were to include such a class in future schedules, with inviting prizes, doubtless they would be forthcoming. This matter refers to the nurserymen and gentlemen's gardeners' class only, as provision was duly made for the amateur division. In the first class prizes were offered for cut flowers, bouquets, dinner-table or dining-room decorations, and to which there was a multitudinous response. Another chief feature in the show was decorative dessert tables, contributed by five contestants, and the redoubtable Mr. J. H. Goodacre, Elvaston Castle Gardens, proved the champion with one of the best arrangements of fruit and flowers yet staged by him. More especially does this refer to the floral element, assimilating in arrangement to his usual style, but more elegant and lighter than usual, inasmuch that it elicited the highest encomiums of the experienced judges. The fruit, which was to consist of twelve dishes, and not less than eight kinds, nor more than two distinct varieties of a kind, consisted of fine examples of *Muscat of Alexandria* and *Madresfield Court Grapes*, fine *Golden Eagle* and *Royal George Peaches*, *Pineapple* and *Victoria Nectarines*, *Tannton Hero* and *Sutton's Al Melons*, *Golden Drop Plums*, *Brown Turkey Figs*, *Souvenir du Congrès Pears*, and *Ribston Pippin Apples*. The second prize was adjudged Mr. J. Doe, gardener to Lord Saville, Rufford Abbey, Notts, for an assortment of very excellent fruits in close competition with the former, but lacking the tasteful arrangement of the cut flowers. His fine bunches and berries of *Muscat of Alexandria* and *Gros Maroc Grapes* were much admired. The third prize went to Mr. A. McCulloch for also very good fruit, having excellent *Muscat of Alexandria* and *Madresfield Court Grapes*; *Sweet Peas* composed the decoration. The fourth prize fell to Mr. J. Read. There were five exhibits in all.

Grapes, though not so extensively or hardly so finely shown as last year, contained several excellent examples, Mr. Goodacre carrying off the first prize in the class for three bunches of any variety of white Grape with large bunches of fine and well-ripened berries of *Muscat of Alexandria*, the second and third prizes going to Messrs. H. D. Smith and George Wadeson respectively, both with very good examples, and fourth Mr. H. Does. For three bunches of black Grapes, any variety, Mr. Goodacre again asserted his pre-eminence with grand bunches and berries of well-finished *Madresfield Court*; the second to Mr. McCulloch, third Mr. G. Wadeson. *Peaches* were very well shown, and Mr. Goodacre was first with a fine dish of *Barrington*; second, Mr. G. Wadeson with same variety, third Mr. J. Doe, and fourth Mr. J. King. *Nectarines* were large and finely coloured, Mr. Goodacre scoring with *Pineapple*, second Mr. J. Doe same variety, third Mr. G. Wadeson with *Victoria*. *Melons* were very good, and Mr. G. Wadeson was the victor with a fine *Earl of Lathom*, a yellow skin variety; second, Mr. H. D. Smith with *Hero of Lockinge*, and third Mr. A. McCulloch. *Apples* and *Pears*, though comparatively small in numbers, were fine and of good quality. *Vegetables* were excellently exhibited in the various classes of single dishes, *Potatoes* being remarkably fine. A similar observation may also be made to the numerous exhibits of vegetables in the amateurs' division, but space forbids a detailed list and description of the prize exhibits. There was also a keen competition for the prizes offered by Messrs. Sutton & Sons and Messrs. Webb & Sons, but no response was observed to the offers made by Messrs. Carter & Co.

The amateurs made a grand display of hardy cut flowers. In the trade exhibits Messrs. Cheal & Sons, Crawley, Sussex, contributed a grand display of *Cactus*, *pompon*, and single *Dahlias*; and the memoranda books were in evidence amongst the host of admirers. Messrs. R. W. Proctor & Sons, Chesterfield, had a fine display of *Roses*, *Dahlias*, &c.; Mr. J. H. White, Worcester, herbaceous flowers, *Roses*, and *Dahlias*; Mr. Deverill, Banbury, cut flowers; Mr. J. Wood, Burton-on-Trent, *Dahlias*, *Gladioli*, and herbaceous flowers. Messrs. Vernon and Barnard, Nantwich, Cheshire, had a decorative stand of their new *Cactus Dahlia*, J. H. Jackson, a dark variety, similar to *Night or Uncle Tom*, with very good twisted petals, but rather flat on the whole; it attracted considerable attention. Mr. Edwards had a rich display of his *Edwardian floral ware*; and Messrs. Barron & Sons, Borrowash Nurseries, Derbyshire, furnished a fine collection of *Conifers* and other trees and shrubs. No honorary awards were allocated to any of the trade exhibits, for some unexplained reason.—G.



NARCISSUS QUEEN OF SPAIN. (See page 267.)

Royal Horticultural—Scientific Committee, Sept. 10th.

Present: Dr. M. T. Masters (in the chair); Messrs. Hogg, Holmes, Drury, Mawley, Chapman, Dr. Cooke, Rev. W. Wilks, and Rev. G. Henslow, Hon. Sec. Visitor, Mr. Crawshaw.

Sedum seedlings.—Mr. Holmes called attention to curious differences in the colouring of the flowers of *C. maximum*. He observed, "The flowers as seen at Kew on the rockery are green. Those of the variety *purpurascens* (or *atropurpureum*?) are purplish, as well as the leaves and stem. In the plant exhibited the colouring appears to follow the development of the flower. The unopened buds have a purplish flush, which seems to disappear when the protandrous stamens emerge; these then assume a pinkish-purple tinge. Finally, when the flower opens the ovaries are at first green, but subsequently assume the same purplish tint. This looks as if it were adapted, in the first place, to attract insects to the flower when the anthers are mature, and secondly to the ovaries. The flowers on the corymb show some flowers with green ovaries, and some with purplish ones."

Fungus pests of the Carnation family.—A long paper on the diseases of Carnations and other genera of the Caryophyllaceæ attacked by fungi, in which every species is described, accompanied by two plates, was presented by Dr. M. C. Cooke, who gave an interesting abstract. The paper will be published in full in the Society's Journal. An unanimous vote of thanks was given to Dr. Cooke for his valuable contribution.

Potentilla with foliaceous flowers.—Rev. C. Wolley-Dod sent specimens of *P. nepalensis*, in which the parts of the flowers were changed into minute green leaves, as occurs on the green Rose and alpine Strawberry.

Malformed Vetch leaflets.—Miss Armitage of Ross sent specimens of the foliage of a Vetch, in which the leaflets in many cases resembled Pea pods. A somewhat similar result from the puncture of insects is known to occur in *Pistacia lentiscus*, and *Beyeria opaca*, of Australia (Jour. Lin. Soc., 1883, p. 84, pl. 21). In this case it is probably due to an aphid.

Begonia subvirescent.—Mr. Wilks received and exhibited a flower, one petal of which was partially green.

Epilobium, monstrous.—Mr. Rasor of Woolpit, Suffolk, sent malformed flowers, observing:—"In a ditch some 40 or 50 yards long were growing hundreds of *E. hirsutum*, one particular batch of which,

containing about a score of plants, had flowers similar to those sent. You will observe that instead of the usual rose coloured petals they are much reduced in size, and have but a faint tinge of colour on the margin." The essential organs were quite perfect, the pollen being shed in the bud, the pistils finally setting abundance of seeds, though the flowers were quite unattractive in appearance to insects.

Odontoglossum diseased.—Mr. Crawshaw asked for information as to the cause of the tips of leaves becoming yellow, brown, and black. The spots appear to start anywhere, and in his opinion were endophytic. It has been known for some six years, and though often examined no fungus has been discovered. It appears on leaves of the first bulb and on young and old plants, though they may be otherwise perfectly healthy and causing no difference in the flowers. No interpretation has as yet been found for the phenomenon.

Bombax sp.—Rev. W. Wilks asked, on behalf of a correspondent, how these trees, presumably the Baobab, *Adansonia digitata* (though not known by this name in books), of Africa, could be destroyed. The large trunks are so soft that the timber cannot be sawn or cut with an axe. Moreover, the natives will not attempt to destroy them for fear of the spirits which they suppose to reside in these trees. Gunpowder and dynamite were suggested, and saturating with saltpetre and then burning might probably prove effective.

Bark stripped off.—Dr. Masters referred to an inquiry made at a previous meeting with reference to strips of bark of an oblong shape, neatly taken off the branches of trees, apparently Larch; no interpretation could then be given. It has been now suggested that the strips in question may have been picked off by nuthatches for the purpose of nest building.

Plum roots diseased.—Mr. Veitch sent some specimens, which Dr. Cooke undertook to examine and report upon.

Viola sylvestris cleistogamous.—Mr. Henslow exhibited specimens of this plant in flower and in fruit, observing that he had never found it otherwise than with cleistogamous buds, which are borne in all the axils of the leaves, whereas in *V. odorata* and *V. hirta* they only occur on the runners concealed beneath the leaves. Though not alluded to by Hooker in the "Students' Flora," it seemed to be an important distinction between *V. canina* with *V. sylvatica* and the last two mentioned. The structure of the buds is much the same in all, the petals being reduced to minute green lanceolate structures, the five anthers having spoon-shaped connectives pressed down upon the summit of the pistil. This has a short curved style with truncate stigmatic orifice.



NARCISSUS MAXIMUS. (See page 267.)

Aquarium Dahlia Show, Sept. 17th, 18th, and 19th.

A Dahlia show, arranged and carried through principally by Mr. Richard Dean, V.M.W., of Ealing, was held within the Royal Aquarium, London, on Tuesday and the two following days of this week. There was a strong turnout of trade growers, and amongst those staging Dahlias were Messrs. Cannell & Sons, Swanley; W. Cuthush & Son; "Hobbies," Ltd. (Mr. J. Green), H. J. Jones (who also staged perennial Asters in-pots); Eric F. Such; Jones & Sons, Shrewsbury; M. V. Seale, Sevenoaks; Dobbie & Co.; J. Surman, Beckenham; T. S. Ware, Ltd.

Hardy flowers, pure and simple, were staged by Messrs. Young and Co., The Nurseries, Stevenage, and a handsome collection of Gladioli spikes came from Messrs. J. Burrell & Co., Cambridge. Blooms of tuberous Begonias picked from the open air were liberally staged by Messrs. J. Peed & Son, forming a very brilliant feature. Mr. J. Walker, Thame, Oxon, staged Zonal Pelargoniums and Show Dahlias, while from Messrs. J. Laing & Sons came a group of early flowering Chrysanthemums and beautiful cut Roses. Lawes' Chemical Manure Co. staged samples of their specialities.

Another chief centre of interest lay in the vegetables brought forward in competition for Messrs. Dobbie & Co.'s valuable money prizes. Leeks and Onions alone were staged, and of the latter there were thirty-four entries, while so many as fifty-four lots of Leeks were laid down. Only the finest samples were here. The prizes for six International Leeks were annexed as follows:—First, Mr. Wm. Liddell, Newburn; second, Mr. A. McVinish, Bean Manor Park Gardens, Loughborough; third, Mr. Geo. Cole, Torrence Castle Gardens, East Kilbride, N.B.; fourth, Mr. J. Howe, Little Haywood, near Stafford; and fifth, Mr. Robert Weir, Rock Alnwick. Onions were good, but decidedly below par, even at that. First, Mr. E. Beckett; second, Mr. Chas. Drew, Chilton Foliat, Hungerford, Berks; third, Mr. John Bond, gardener to W. E. S. Earle Drax, Esq., Olantigh Towers Gardens, Wye, Kent; fourth, Mr. James Hunt, Alton St. Pancras, near Cerne, Dorset; fifth, Mr. G. H. Copys, Holnest Park Gardens, Sherborne, Dorset.

The first prize half dozen Onions weighed 15½ lbs., and the heaviest bulb individually weighed 2¼ lbs. The first prize Leeks averaged 13½ inches blanched length, with a circumference of 6½ inches. Messrs. Dobbie themselves set up Parsnips and Carrots of great length and superior quality. They also staged an interesting collection of Gourds, Pumpkins, and Squashes. In a note on page 215, last week, we referred to the Kew collection of the above, and there stated that we thought seeds could only be got from Parisian nurserymen. It is pleasing to know that Messrs. Dobbie have some thirty-four varieties.

Nurserymen's Competitions.

SHOW AND FANCY DAHLIAS.—In the first schedule class for two dozen distinct blooms, as above, Mr. John Walker of Thame led off, beating Mr. Chas. Turner; and third Mr. G. Humphries, Chippenham, all with first-rate blooms. Mr. J. R. Tranter, Henley-on-Thames, stood first for the dozen, Mr. C. Turner following.

CACTUS VARS.—Five fine lots of twelve vars. in six blooms each were staged. Messrs. J. Burrell repeated their Crystal Palace success by winning first; the other prizes fell respectively to Messrs. J. Stredwick and Son, Messrs. Keynes, Williams & Co., and Mr. M. V. Seale.

For twelve bunches of pompons, in tens, Mr. C. Turner stood foremost, Mr. Seale second, Messrs. J. Stredwick & Son third; and for the twelve varieties of singles, in bunches of six blooms each, Mr. J. Walker beat Mr. Seale, each with fine lots.

Amateurs.

Some tasteful exhibits were staged in the section devoted to Cactus varieties. H. L. Brousson, jun., Esq., Sidcup, Kent, led in class 8 for nine vars., three blooms each, having Uncle Tom, Viscountess Sherbrook, J. W. Wilkinson, Loyalty, Charles Woodbridge, Mrs. J. J. Crowe, Rosine, and Mayor Tuppenny. The second award fell to H. A. Needs, Esq., and third to F. W. Sharpe, Esq., Great Martins, Twyford. Eight collections were arranged. H. A. Needs, Esq., won for a vase of a dozen blooms; Ed. Mawley, Esq., second, and Astley Vigers, Esq., Walton-on-Thames, third.

Certificated Varieties.

In the class for three vases, each containing nine blooms, arranged with any kind of foliage, the first prize was accorded to Mr. W. V. Seale, the second to Mr. J. Walker, and other well known growers secured the other awards.

Certificated varieties were as follows, most of them have been previously described: CACTUS—Mrs. H. J. Jones and Spotless Queen, both from Mr. J. T. West; Sailor Prince from "Hobbies Ltd." (Mr. J. Green); Mrs. Edward Mawley, Lottie Dean, Clio, from Messrs. Burrell & Co.; John Burn, from Mr. S. Mortimer; Ringdove, Gabriel, Ophir, from Messrs. Keynes, Williams, & Co.; Ant. Chloe, Althae, Goldfinch, Clara Stredwick, G. W. Tullock, Mrs. Winstanley, Lilac, and Rufus, all from Messrs. Stredwick & Sons.

Show Dahlia Merlin came from Mr. C. Turner.

POMPON varieties.—Mildred, from Mr. C. Turner; Beauty of Sevenoaks, from Mr. M. V. Seale; Irma and Minna, both from Turner. **SINGLES**—Robin Adair and Royal Sovereign, both from Mr. M. V. Seale.

Medals.

Large gold to "Hobbies," Ltd. (Mr. J. Green).

Gold medals to Messrs. Jones & Sons, Shrewsbury; Cannell & Sons, Swanley; Dobbie & Co., Rothesay, N.B.; M. V. Seale, Sevenoaks; and Burrell & Co., Cambridge.

Silver-gilt medals to Messrs. J. Peed & Son, South Norwood; J. Laing & Sons, Forest Hill.

Silver medals to Mr. E. F. Snch, Maidenhead; Messrs. Cuthush and Sons, Highgate; and J. Surman, Beckenham.

Edinburgh Flower Show, September 11th and 12th.

(Concluded from page 248.)

The following awards of the Royal Caledonian Horticultural Society, Edinburgh, were not published last week at time of forwarding report of show. Silver-gilt medal and special award to Mr. John Downie, Murrayfield, and 144, Princes Street, Edinburgh. Silver medal and special award to Messrs. R. B. Laird & Sons, Ltd., Pinkhill Nurseries. Small silver medals and awards to Messrs. Cunningham, Fraser & Co., Comely Bank, Edinburgh; Messrs. Cuthbertson, Rothesay; Forbes, Hawick; Irvine, Jedburgh; Eckford, Wem; and Cocker & Sons, Aberdeen. Special awards to Messrs. J. Methven & Sons, Edinburgh; Kerr Bros., Dumfries; James Grieve & Sons, Pirig; A. Lister & Sons, Rothesay; M. Campbell & Sons, Blantyre; and Mr. Phillips, Granton. The Floral Committee awarded a first class certificate to Messrs. Laing and Mather, Kelso, for Carnation Sir R. Waldie Griffiths, and to Mr. C. Freeland, Larkhall, an award of merit for Carnation Gala Day, a round-petalled white variety.

Grapes.

It is somewhat remarkable that while Muscat of Alexandria, Gros Colman, and Lady Downe's were scarcely so good or so largely shown as usual, Black Hamburg was presented in not only a large number of bunches, but also in a condition, as regards quality, seldom seen quite so good. Mr. James Menzies, Larbert; Mr. Cairns, Balruddery; Mr. Buchanan, Girvan, Ayr; and Mr. Potter, Whitehall, Cumberland, are some of the more prominent exhibitors of this grand old Grape. Then we had one or two examples of Appley Towers, notably those from Mr. D. Kidd, Carberry House, Musselburgh, which proves this to be a variety of handsome appearance. Madresfield Court was another Grape of the year, the examples from Mr. Lunt, Keir, being especially good and well finished. White Grapes, though an improvement on those shown at Glasgow, were generally not up to the average.

Pears and Apples.

The exhibition of these popular fruits once more proves that Britain need not depend on the foreigner if she chooses to exert herself and grow her own. Both fruits were represented more extensively than at Glasgow, though the average was perhaps not so high. The best Pears shown comprised Beurré D'Ure, Benrre d'Amanlis, Beurré Superfin, Souvenir du Congrès, Doyenné du Comice, Louise Bonne of Jersey, Magnate, and Pitmaston Duchess; and the most successful exhibitors were Mr. Day, Galloway House, Wigton; Mr. Galloway, the new head gardener in place of Mr. T. Cook, at Gosford, Longniddry; Mr. Cairns, The Hirsell, Coldstream; Mr. Gordon, Ewanfield, Ayr; and Mr. Greenfield, Kilmun. Apples contained more dishes that could be called, in Scots phrase, "by-ordinary." There were grand examples staged, some in large numbers, of, among others, The Queen, Lord Snfield, Ecklinville Seedling, Stirling Castle, James Grieve, Lady Sudeley, Warner's King, Loddington, Peasgood's Nonesuch, and Cox's Pomona; the chief prizewinners being Mr. Sinclair, Congulton, Drem; Mr. Whiting, Hereford; Mr. Cairns, Mr. Day, and Mr. Beisant, Castle Huntly, Perth. In addition to Apples in season, a number of late kinds, immature and out of character, were also shown. The inclusion in the prize list of such late sorts as Northern Greening and Mère de Ménéage has surely no good effect on Apple culture, while the fruits lessen the quality of the exhibition.

Plants and Cut Flowers.

Of these it may be said that in the east of Scotland plant growing is very far ahead of what it is in the west, as evidenced by the Glasgow Show. The Crotons and foliage plants, especially those staged by Mr. Lunt, Keir House, being large and in first-rate condition. Ferns from Mr. Neil Fraser, Rockville, Murrayfield, were also much beyond the average. Very few Orchids were shown, but of the class of plants commonly grown for greenhouse decoration, such as double and single Begonia, small decorative plants, &c., there was a good show.

The beautiful display of Sweet Peas has already been commented on. It had only one drawback in the exhibits being crunched together into far too little space. Gardeners, it may be said, were quite out of the running for these, amateurs taking all the chief prizes, and very fine indeed were their exhibits. One would like to say more of the Hollyhocks, Phloxes, and Pentstemons, with Violas, Dahlias in great profusion, and Carnations shown by several trade growers, and of the wonderfully bright display of herbaceous cut flowers, which are always so prominent a feature at Edinburgh, but space forbids.

The happy experience of inviting Lord Rosebery to open the show must, however, not pass without remark, an addition of 4000 visitors, with a corresponding inflation of receipts, was largely due to that cause. Certainly Mr. P. Murray Thomson, S.S.C., the hard working secretary, has cause to feel satisfied on this occasion.



EUPHARIS LOWI. (See page 277.)

Boston and District Dahlia, Sept. 12th.

Boston, like Wellingborough, can get together a very attractive Dahlia show. Like Wellingborough, it is also dependent upon the southern growers, and therefore certain leading classes are open to competition among all comers, while several classes are reserved for local amateurs and cottagers. The show was held in the Corn Exchange on the 12th inst.; the building was quite filled, and the arrangements made by the secretary, Mr. Frank Waite, a well-known seedsman in the town, were excellent. The top of the hall was occupied by a very large and representative collection of Dahlias, the Cactus type predominating, sent by Mr. J. Green (Hobbies & Co.), Norfolk Nursery, Dereham, in which could be seen several fine new Cactus varieties, and also some dwarf growing varieties with distinct quilled centres and a fringe of ray florets, like an Anemone-flowered Chrysanthemum. The silver medal of the National Dahlia Society was awarded to this exhibit. Mr. T. B. Dolby, nurseryman, Boston, had a collection of Dahlias; Messrs. H. H. Small & Co., nurserymen, Skirbeck, Boston, had a collection of hardy flowers, early Chrysanthemums, Gourds, &c.; Mr. E. J. Disbrowe, a local specialist in flowers, had a choice collection of Phloxes, Asters, Pentstemons, &c. There were four entries of twenty-four blooms of Show and Fancy Dahlias. Mr. John Walker, Thame, was a good first, the blooms generally showing an improvement in quality over those staged at the Crystal Palace. Such varieties as the Rev. J. B. M. Camm, Victor, Dr. Keynes, R. T. Rawlings, J. T. West, Shottesham Hero, Mrs. G. R. Jefford, Florence Tranter, Buffalo Bill, Maud Fellowes, Shirley Hibberd, &c., were in excellent form. Mr. S. Mortimer, Farnham, was a close second, also with blooms showing manifest improvement; and Mr. Seale, Sevenoaks, and Mr. Geo. Humphries, Chippenham, were equal third. With twelve blooms Mr. Geo. Humphries was first and Mr. J. Walker second, both with very good flowers.

The class for twelve bunches of Cactus Dahlias, six blooms in a bunch, brought capital competition, and Mr. S. Mortimer was placed first with very fine bunches of Floradora, Viscountess Sherbrooke, Zephyr, Mrs. Carter Page, Spitfire (new), bright pale red; Uncle Tom, Mrs. J. J. Crowe, Lyric, J. F. Hudson, J. Burn (new), bright crimson, extra fine, &c. Mr. John Walker was placed second. He had Canary (new), pleasing soft yellow; Lord Roberts; Debonair, Mrs. Carter Page, Baden Powell, J. W. Wilkinson, Lincius, &c., also a fine display; Mr. Seale was third. With twenty-four blooms of Cactus Dahlias shown on boards, there was a spirited competition. Mr. S. Mortimer was first with highly developed blooms of Mrs. J. J. Crowe, Mrs. Carter Page, Cornucopia, Radiance, Lincius, Uncle Tom, Jealousy, Chas. Woodbridge, Mrs. Walton White, Mary Service, Monarch, Mrs. Castle, &c. Mr. J. Walker was second, having most of the foregoing, but in addition Canary (new), Innovation, Debonair, Stella, The Clown, Rosine, Vesta, &c.; Mr. W. Baxter, Woking, was a very good third with twelve blooms. Mr. Mortimer was again first and Mr. J. Walker second.

There were some excellent collections of Pompon Dahlias. Mr. Seale was first with perfect flowers of Doris, Donovan, Douglas, Daisy, Jessica, Phoebe, Ganymede, Nerissa, Tommy Keith, Buttercup, &c. Mr. Geo. Humphries was a close second, and Mr. J. Walker third. Some very attractive vases were shown by Messrs. Walker, Seale, and Martin, the prizes going in the order of their names. Cactus Dahlias were used, mingled with foliage. Dahlias were creditably shown by amateurs and cottagers, and every year witnesses an improvement in the quality of the flowers they stage.

The leading growers present formed themselves into a floral committee, and certificates of merit were awarded to the following varieties:—Cactus John Burn (Mortimer), Canary (Walker), Mrs. H. A. Needs (Baxter), Queen of Hearts, and Sailor Prince, both from Hobbies and Co.; and to singles Beauty of Sevenoaks, Maid of Athens, and Royal Sovereign from Mr. Seale.

Sparkhill and District Horticultural.

At a recent meeting of this new and enterprising association, Mr. W. Gardiner, Harborne, Birmingham, gave a dissertation, entitled "A Chat upon British Ferns." Mr. S. Issett occupied the chair, and there was a good attendance of members and their lady friends, the latter especially being much interested in this beautiful and interesting division of the vegetable kingdom. The lecture was illustrated by a numerous collection of freshly cut fronds and dried specimens. The history and legendary lore of Ferns formed the introductory portion of the discourse, with also an explanation of a few of the more familiar technical characters and etymology of the generic names.

In acknowledging a vote of thanks, Mr. Gardiner intimated that, by the unanimous request of the meeting, he should have much pleasure in continuing the subject at some future time. There was a keen competition for the prizes offered for cut flowers, plants, &c., usually offered at the meetings; and one member, Mr. Charles Fox, Oakwood Road, Sparkhill, exhibited a very interesting collection of hardy Ferns in pots, grown in a shady small greenhouse. The collection contained well-grown plants of *Polypodium cambricum*, *P. Dryopteris*, and *Adiantum Capillus Veneris*.

Forest Trees in Scotland.

Mr. W. N. Niven read a paper at the British Association on "The Distribution of Certain Forest Trees in Scotland, as shown by the Investigation of the Post-Glacial Deposits." He said he had derived his information from about seventy volumes. The following trees had been discovered:—Hawthorn, Elder, common Ash, Birch, Alder, Hazel, Oak, Willow, Yew, and Fir, all of which, with the exception of the Ash, were considered natives of Scotland. The cones of the Silver Fir had been dug out of the peat in Orkney, but this tree was not now indigenous to Scotland. Several shrubs, including the Juniper and Raspberry, as well as many flowering plants, had also been discovered. There were few parts of Scotland, however treeless at the present day, that were not in remote, and even in comparatively recent times covered with woodlands. This was also shown by the place names. As regarded the special trees, the Oak was very widely distributed. Its most northern occurrence was Caithness-shire, and it was recorded in every other county. It had even been found in the peat bogs in the now treeless islands of Lewis and Tiree. It was interesting to note that many of the Oaks had been found at high altitudes, 800 feet above sea level, in the parish of Croy, Inverness-shire, and of considerable size—70 feet in length at Drumorief. The Scots Fir—probably *Pinus sylvestris*—was another widely distributed tree. It was common in the northern counties, in the Orkneys and Lewis, in all the midland counties, with the exception of Forfar and Fife, but in the southern counties it was only recorded in Renfrew, Edinburgh, Roxburgh, Dumfries, and Wigtown. The Hazel had been found in submerged forests and in many other parts of the mainland, as well as in the Orkney and Shetland Islands, and in many of the Western Isles. No record had been found of its occurrence in Sutherland, but throughout the midlands it was fairly plentiful, and in the lowlands it had been noted in all the counties, with the exception of Haddington, Linlithgow, Selkirk, Dumfries, and Wigtown. The Birch was recorded in the Orkney and Shetland Islands, and in the majority of the counties from Caithness to Wigtown. Regarding the other trees, few records had been discovered. The Alder was recorded from Lewis, Banff, Aberdeen, Kincardine, Perth, Fife, Argyle, Lanark, and Edinburgh. Willows, species unknown, were noted in both Caithness and Sutherland. They had also been obtained from the peat bogs in Renfrew, Lanark, and Roxburgh. The Ash was generally regarded as a probable native in the south of Scotland. Hugh Miller, in "Edinburgh and its Neighborhood," made reference to finding "what appears to be Ash" in the brickclays of Portobello. It was also recorded from the mosses in Ballantrae, Ayrshire, and Bowden Parish, Roxburghshire. Then, again, many of the implements found in southern crannogs were reported to be made of Ash wood, but it must also be regarded as indigenous in northern Scotland, if they accepted its occurrence in the Bay of Keiss, Caithness-shire, mentioned by the writer on Caithness in the "New Statistical Account." The only records of the occurrence of the Hawthorn, Yew, and Elder had been obtained from Edinburghshire. The evidence which was obtained by the examination of the various postglacial deposits indicated in a very clear manner that the trees recorded should be considered truly indigenous to Scotland.

Some Uses of the Lemon.

WOMEN particularly would find a more general use of Lemons as simple remedies, where ordinarily doctors' medicines are employed, efficacious and economical. One of the most pleasing baths is made by slicing three or four Lemons into the water, which should be drawn half an hour before using, so that the juice of the fruit may have a chance to permeate it. The sense of freshness it gives, and the suppleness and smoothness it imparts to the skin, are very luxurious. In the West Indies often the Lemon is used instead of soap, and when the natives wash their hands they squeeze the juice over them and rub them briskly in water until they are clean.

The Lemon is invaluable in its effects on the complexion. A few drops in the water in which the face is washed removes all greasiness, and leaves the skin fresh and velvety. A little Lemon juice rubbed on the cheeks before going to bed, and allowed to dry there, will remove freckles and whiten the skin, besides giving a delightful smoothness, and if the treatment is persisted in, eventually it will carry off all unsightly blemishes that are not caused by internal trouble.

Lemons, says "The Canadian Horticulturist," are very useful in the care of the teeth. A few drops squeezed into a glass of water for rinsing the mouth make a tonic for the gums and render them firm. In washing the hair, if a Lemon is used, it will cleanse the scalp and give a soft fluffiness to the hair that women like.

Eucharis Lowi.—The very distinct *Eucharis* illustrated on another page was introduced by Messrs. Hugh Low & Co., Bush Hill Park Nursery, Middlesex, about a dozen years ago. The flowers are as large as those of *Eucharis grandiflora*, and exceedingly beautiful. The flowing sinuous lines of the segments incurve in a distinctive manner, and are pure white, with yellowish-green where the stamens join the corona. "The leaves are borne on tall footstalks, and are similar in shape to *E. candida*, though considerably larger."



Hardy Fruit Garden.

Strawberries.—*Preparing Ground.*—The main crop of well-established runners may be planted during the course of the following weeks, if they have not already been inserted. Should the ground, however, not be sufficiently prepared for the reception of the plants, it ought at once to be deeply dug or trenched, adding manure according to the quality of the soil. Fertile soil should not require the addition of manure, but deep digging or bastard trenching will improve this or any soil. In trenching, take care to keep the good soil on the surface wherever the subsoil is of an indifferent character. Break up the latter to a good depth. If strong and heavy this will to some extent ameliorate it, and drainage water will more readily pass through it. The broken-up subsoil in light ground has a tendency to retain moisture better than when lying dry and hard, and during dry periods the plants derive much assistance from the moisture lying below them in a well prepared subsoil. Ground that has been thoroughly manured and broken up for a preceding crop is often requisitioned for autumn planting Strawberries. With such ground less preparation is needed now, because, being in good heart, it only requires to be cleaned and levelled, when it is ready for the insertion of the Strawberries, which should now be planted.

Planting.—Plants rooted in pots, or those well rooted in the open ground, can be employed. These, of course, are the best, owing to their abundance of roots and the ease with which they will be established, but plants obtained from a distance will not have roots so numerous, nor soil attached to them. These require more care in planting, and it will be necessary to spread them out, covering carefully and firmly with good soil. Should the weather be dry, water them well in. The distance between the rows may be 2 feet; very strong growers will require the rows wider apart, but 30 inches will be ample. In the former case the distance between the plants may be 15 inches, in the latter give 18 inches, nothing being gained by undue crowding.

Cleaning and Mulching.—If the clearing away of weeds and runners has been deferred, the work ought now to be carried out. Cut the runner wires close to the crown, and also sever large old leaves. Strong and deep rooting weeds must be forked up, clearing them away with the other material; the smaller and annual weeds may be hoed down. Following closely on this removal a liberal mulching of decayed manure may be spread between the rows. It will especially benefit old established plants, and those younger which have borne a heavy crop of fruit.

Small Runners.—It might be desirable to preserve a quantity of the small runners, which are not quite sufficiently well rooted to finally plant now in rows. If, however, a small bed is well dug over a batch may be planted 6 inches apart. The plants will, in the course of the autumn, become thoroughly established, and in the spring can be lifted and planted permanently. Very little fruit, if any, should be carried by these the first season; they ought, however, to show a flower truss on each, which may be early removed.

Raspberries.—The work of cutting out the old bearing canes is very

frequently left until winter, but it should be done as soon as practicable after the crop has been gathered. The early removal of the useless canes gives the new rods a better chance of receiving plenty of light and air, and becoming well ripened. After cleansing away weeds and rubbish, the surface may be lightly pricked over and a thorough good mulching of manure applied. Raspberries, being strong feeders and producing abundance of fibrous roots close to the surface of soil, are always benefited by surface manuring. Liquid manure can also be given with advantage. Where it is contemplated forming new plantations of Raspberries the ground may be prepared as opportunity permits. In the case of these the ground can scarcely be too deeply dug or over-manured. Success mainly depends on encouraging vigorous growth the first season. This is accomplished if the inserted plants are closely pruned the first season, allowing strong growths but no fruit.

Plums.—Nets should be hung over bush trees, and also in front of wall trees where the fruit is ripening, to protect them from birds. If wasps are troublesome, wide mouthed bottles half-filled with beer and sugar will attract a number. Gather the forwardest fruits as they ripen. Some may be preserved in good condition in a cool dry room for a short time, but if desired to preserve them longer, wrap each fruit in tissue paper and place in a box. Some of the later ripening Plums will keep excellently in this way.

Gathering and Storing Apples and Pears.—Immediately the fruits are ready to gather from any special trees it is desirable to remove them to the safe storage of the fruit room. The greatest care must be given in storing the choicest fruits of the best varieties so that

they do not become bruised, this impairing their keeping qualities. Some trees do not ripen all their fruits at the same time, and it is specially necessary to go over the trees at intervals, removing those that are ready. When they part readily from the spurs on lifting carefully, this is a true test of their fitness to be gathered. In storing Apples and Pears place them apart if possible. As a rule Pears may have more warmth than Apples. The ripening of Pears may be accelerated by a little extra warmth after they have been stored for a short time in



GALANTHUS WHITTALLI. (See page 267.)

cooler quarters. If room is available store all fruit in single layers.—LYMINGTON, HANTS.

Fruit Forcing.

Peaches and Nectarines.—*Early Forced Trees.*—We would again urge the necessity of attention to these trees as soon as the leaves are all down, following the instructions given in a former calendar, as the procedure strikes at the root of pests passing over from year to year, especially red spider and scale, and gives the trees the advantage of thorough rest, with opportunity of pushing fresh roots, thus being well prepared for a fresh start when the proper time arrives.

Early Forced Trees in Pots.—Where new trees have to be bought, the earliest placed orders generally secure the best trees, and they can have their requirements attended to in respect of top-dressing without delay. This is very important, as those disturbed late at the roots do not carry the buds well, nor is the start and setting of the fruit nearly so satisfactory as when this has been anticipated by timely attention to secure it in the late summer.

Second Early Forced Trees.—These are the first in many places, being started at the new year. They will have shed their leaves, or will be shedding shortly, and should be attended to in pruning, cleansing the house, dressing the trees, and top-dressing the border according to instructions already referred to. This gives them better advantages than putting off everything until the last moment, when neither house nor trees can be properly cleansed, and much after trouble in respect of pests is the consequence.

Late Peaches are very noble in appearance, and of excellent quality when well done. Prince of Wales, very little seen, is a magnificent fruit when grown under glass and in warm soils, but it is not satisfactory against walls and in heavy soils. Gladstone, a similar fruit, does splendidly in a late house, it being very large and of first-rate quality when well fed during growth. For looks, Princess of Wales is, perhaps, the grandest of all late summer Peaches, attaining a large size and assuming fine colour under favouring circumstances; and Late Admirable also has both size and quality to recommend it, also Walburton Admirable. Sea Eagle sometimes colours grandly, and even when pale has a very pleasing appearance, its size and good qualities rendering it very desirable. Golden Eagle has both size, golden colour, and good quality to recommend it, while Comet proves very acceptable early in October.—ST. ALBANS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matter discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Crab Apple (G. H. S.).—Your fruits (pome) are those of *Pyrus Malus Bertini*, a variety of Siberian Crab.

Creature Found in Early Peach House (A. E. M.).—The box arrived, and the specimen inside had been reduced to slime, which smelt most offensively, and was at once placed in the fire, as it was utterly impossible to determine one kind of putrefying animal matter from another. We extremely regret this. It was probably a tapeworm.

Analysis of Sewage Deposit: its Value as Manure (J. H.).—The analysis—

Moisture	...	...	...	...	...	54.90
Organic matter	...	...	...	...	...	10.72
Nitrogen	0.525,	equal to ammonia	0.637	...	...
Phosphates	...	...	...	...	...	1.87
Silica	...	...	...	...	...	7.25
Other mineral matter	...	...	...	...	...	25.26

100.00

shows a very poor manurial article, and chiefly valuable for the organic matter; phosphates and addition of solid matter increasing the bulk of the soil, as well as from the large amount of lime usually forming a large proportion of the "other mineral matter." It would be a good dressing for (1) Raspberries and (2) fruit trees generally, applying it similarly to ordinary farmyard manure, and at the same rate, 12 to 20 tons per acre. In addition to this we should apply a mixture of equal parts superphosphate of lime and kainit, $3\frac{1}{2}$ lbs. per rod, 5 cwt. per acre, and in the autumn. In spring, when growth commences, finely crushed nitrate of soda may be used, $1\frac{1}{2}$ lb. per rod, $2\frac{1}{2}$ cwt. per acre, it being best applied at twice, (1) when growth commences, and (2) as soon as the crop of fruit is set, half quantity each time, and always when the ground is moist.

Spray of Plum Tree—Leaves of Pear and Cracked Pears (C. N.).—The leaves of the Plum tree twig are affected by what is known as "silver-leaf" disease. The same also occurs on Portugal Laurels. External applications are not of any service, but we do not think you have any immediate cause for alarm, as the leaves are but slightly affected. 2, The Pear leaves have been affected by Pear-leaf gall mite, *Phytoptus pyri*, and also by the Pear scab fungus, *Fusicladium pyrinum*. The mite seldom does much mischief, but to prevent its attacks the trees may be sprayed in winter with paraffin emulsion diluted with seven parts water. 3, The Pears are infested by the Pear-scab fungus, *Fusicladium pyrinum*, which frequently spoils greater part of the fruit and sometimes the whole crop. The disease has been successfully combated by spraying with dilute Bordeaux mixture (1 lb. copper sulphate and 1 lb. quicklime to $12\frac{1}{2}$ gallons water). First, just as the flower buds begin to open; second, when the petals of the flowers are falling; and third, when the fruit is the size of horse beans, or slightly larger. If the season be rainy a fourth treatment should be given twelve days or a fortnight after the third. If $\frac{3}{4}$ oz. of Paris green is added to the $12\frac{1}{2}$ gallons of dilute Bordeaux mixture at the time of the third spraying, it will hold the codlin moth caterpillar in check. It is also advisable to spray the trees whilst quite dormant with a solution of copper sulphate, 1 lb. to 25 gallons of water. This must not be used at any other time, and ordinary Bordeaux mixture not be used on foliage of the Pear, but only the dilute form as advised, for ordinary Bordeaux mixture is apt to scorch the foliage, especially when young, hence the imperativeness of only using the dilute form.

Propagating the Rose of Sharon (J. L. S.).—The Rose of Sharon, *Hibiscus syriacus*, can be propagated from ripened wood taken in the latter part of the season and put in frames. Left there during the winter, they are rooted by spring time.

Name of Caterpillar (J. W. L.).—The insect sent is the caterpillar, about two-thirds grown, of the death's head moth, *Acherontia atropos*, which occurs amongst Potatoes in the autumn, and is found most seasons; in some it is frequent about certain localities, especially south and east of England. It produces our largest moth, one with a somewhat remarkable history, and also with some mystery attached to its habits. Owing to the skull-like markings on the thorax, and the power it has of uttering a curious plaintive cry, it has always been regarded with surprise, or even alarm. The caterpillar is stated to produce a sound too, which is rather different, but the specimen forwarded to us, owing to fatigue or fasting, has not attempted any vocal performances.

Chrysanthemum Buds Decayed (R. M. D.).—The buds have the centres destroyed, and in a state of decay; but though we examined them carefully, there is no animal or vegetable parasite present to account for the decaying of the tissues. In similar case we have found mites, an example of which was investigated by Mr. G. Abbey on September 11th, 1893, and was illustrated in the *Journal of Horticulture*, September 28th, 1893, page 291. The attack is exactly the same, and we consider the buds have been infested by the *Chrysanthemum* bud mite, *Phytoptus chrysanthemi*, at an earlier stage. The pest appears to select hot and dry seasons for its attacks, and also has a penchant for some varieties more than others, M. Carnot and family in your case being attacked and the buds destroyed, while you have not lost a bud of any other variety. Possibly treatment with petroleum emulsion 8 ozs., and sulphide of potassium 1 oz., to 3 gallons of soft water would have prevented the attack, the plants being sprayed from the early part of July, or even earlier, at fortnightly intervals up to the middle of August. Judging by the vigour of the stems and superb health of the leaves, there does not appear anything wrong with the management of the plants.

Pest on Branch of Cotoneaster (J. M. W.).—It is Mussel scale, *Mytilaspis pomorum*, which infests several genera and species of rosaceous plants, including evergreens; we have recently had specimen of the pest brought to our notice on the Myrtle-leaved Portugal Laurel, *Ceratus lusitanica myrtifolia*. The insect differs somewhat in the several host plants in size and even in form, but there is no distinctive feature, the life history being identical. The most successful treatment is to spray the bushes or trees whilst quite dormant with a solution of caustic soda (98 per cent. purity), and commercial potash (pearlash), 1 oz. of each to a gallon of water, hot water being used for dissolving, and the solution applied at a temperature of $132\frac{1}{2}^{\circ}$, or not over 135° , or lower than 130° . The weather should be mild when the solution is applied, but the bush or bushes dry. This will usually bring off the scale with the eggs beneath, leaving the bark quite clean. The larvæ or young scale hatch from the eggs towards the end of May and beginning of June, and are then woodlouse-like creatures, which, moving about over the bark a few days before fixing themselves upon it by inserting their tiny beaks far enough to reach the sap, are then readily destroyed by spraying with paraffin oil emulsion. It is readily made by dissolving 1 pint of softsoap in a quart of boiling soft water, then removing from the fire, and while still boiling hot add half a pint of paraffin oil, and immediately churn the mixture with a small hand syringe. In five minutes a perfect emulsion will be obtained, and for use should be diluted with ten times its volume of water, this being preferably hot, and the solution applied at a temperature of 130° to 135° . Treatment should commence about the middle of May, and be repeated at weekly intervals up to the middle of June.

Names of Fruit (C. N.).—Plum Victoria. (W. S.).—1, Pear Souvenir du Congrès; 2, Apple Albany; 3, Cox's Pomona; 4, Cellini; 5, Wealthy; 6, Margil (syn. Neverfail). (T.).—1, Peach Royal George; 2, Rubus fruticosus. (N.).—1, Plum Diamond; 2, Apple New Hawthornden; 3, Lady Sudeley. (S. D.).—Plum Magnum Bonum.

Names of Flowers (Cymro).—*Epilobium angustifolium*. (J. R. S.).—1, Campanula persicifolia; 2, Piptanthus nepalensis, as figured last week; 3, Tritonia (Montbretia) Pottsi; 4, Odontoglossum odoratum; 5, Epidendrum radicans. (A. T.).—1, Thuya orientalis var.; 2, Quercus ruber; 3, Quercus pedunculata; 4, Clematis coccinea. (A. L. F.).—Juniperus bermudiana, a much confused species. (S. D.).—1, see "Names of Fruits;" 2, Melissa officinalis, the Balm; 3, Tanacetum vulgare, the Tansy; 4, Choisya ternata. (Hugh Shearer).—Thalictrum adiantifolium. It is not a Fern, but a border plant; you cannot stage it with Ferns. (Harborne).—Euonymus latifolius. Others next week

Phenological Observations.

SEPT. 20TH TO SEPT. 26TH.

PLANTS DEDICATED TO EACH DAY.

20 Fri. Chiffchaff's song ceases.
21 Sat. Lime-leaves fall.
22 Sun. Herald-moth seen.
23 Mon. Bush-nuts fall.
24 Tu. Leycesteria fruits coloured.
25 Wed. Ash-leaves lemon coloured.
26 Thr. Ivy flowers.

Meadow Saffron.
Ciliated Passion-flower.
Tree Boletus.
Bushy Starwort.
Dung Fungus.
Ox Boletus.
Gigantic Golden Rod.



Backward and Forward.

WITH the harvest of grain gathered in, and preparations for another seed time on the way, it would seem fitting to take a survey of the farming year so far as it has gone. We have sown and reaped. The fruits of the earth, such as they are, may be realised well or badly, and the result may largely depend on the financial position of the individual farmer.

We have noticed only too often the disadvantages under which the impecunious farmer lies from being so constantly forced into premature sales against his own better judgment. This applies very strongly to the small farmer class, and it is to minimise the difficulties of these small farmers that the system of agricultural credit banks has been started. Mr. Rider Haggard, in one of his recent articles, speaks in high praise of the benefits conferred by one such organisation which he came across in Lincolnshire, and we trust that ere long a very large increase in the number of village credit banks will have been brought about. We agree with Mr. Haggard in thinking that the establishment of such banks would do much to reproduce the now almost extinct class of yeomen, and at the same time solve the agricultural problem. We believe that Mr. Yerburgh, M.P. for Chester, is always ready to supply information and advice to those who require them in connection with the inauguration of a village bank.

Looking back on the past six months we can see much to be thankful for, and we think that as regards this part of the country things have not gone so badly with the average farmer. The winter was mild, and there was an absence of good frost mould, which provides such an ideal seedbed for Barley and Oats. A plethora of Turnips kept sheep on the land until very late, which put off Barley sowing. Thus owing to one cause or other spring sowing was delayed and a late start made. April, however, as it should be, was showery, and May dry, so a well-rooted healthy plant was obtained. We had sufficient rain in June to grow the crops on into fair average ones, though we fear in some parts farmers were not so fortunate. Wheat would have been better for a little more winter frost and loss of root, being very thick of plant in the spring. Where top-dressings were applied in time it was kept growing, and attained a fair length, an average bulk of straw, and probably more than an average yield, but many fields which were unassisted turned yellow in May, and, never recovering their natural vigour, ripened off too short of straw and small of ear to be financially satisfactory.

We do not know whether it is owing to a restriction of the supplies by a syndicate, but it is a fact that during April and May nitrate of soda is often difficult to procure at short notice, and that at the time when urgent demands for it are most frequently made. It is wise for farmers to keep a stock by them from the end of February for use when necessity requires. If not wanted for top-dressing Corn it can be used for Potatoes or Mangold later on. July was a little too dry for Corn, but splendid for making hay, which was all got in fine condition. Unfortunately there was too little of it. Clover was good, but would have been better for a little more rain in May.

Of the Turnip crop it is difficult to speak with certainty, as it varies so much in different localities; still, we have reason to believe that in the chief Turnip growing counties, notwithstanding partial failures, the prospect is a good one, and though we may not have the abundance of last season, our live stock will have enough and to spare.

Potatoes we believe to be much better than last year, both as regards quantity and quality, and we shall be surprised if prices are not below the average. July rain, which is so necessary for Potatoes on light soils, did not fall in sufficient volume, and the ridges did not receive a thorough soaking until early in August. Therefore there is a good deal of second growth on such soils, and consequently much supertuberation. Thus the quality from light land will not be good, though the crop will be heavy; on good soils the crops are magnificent, size is large and shape excellent. The Up-to-Date has fully held its place as the best Potato in cultivation. The other kinds which were to supersede it are occupying very secondary positions.

Pastures (*i.e.*, grass) were poor and bare through May; they improved a little in June, but became very brown in July, and there is still but a short bite. Cows lost much of their milk supply at the end of June, and they are still giving a very poor return. Butter has been dear for the time of the year, but the rise should have been double to make up fully for the loss in quantity. We fear the farmer's wife is not having a good year, though hens have laid well and eggs have met a fair

sale. It has been also a good year for poultry rearing; chickens have been healthy, and there have been but few deaths, but we never could see any profit in rearing fowls to sell at ordinary hucksters' prices, so the Missis would hardly make good her deficiency there.

Seed pastures, in contrast to grass, were very good in the spring, and kept their freshness for a long time. July, however, saw them becoming bare, which they still are, and there will be little herbage to plough in when ploughing is possible. We wish the prospect for the new Clovers was as good as last. Hundreds and thousands of acres of new seeds are hardly worth keeping for any purpose, and many fields of year-old Clover will be spared for another season, the fields which should have been under this crop being dragged and prepared for sowing with another crop of Barley or Oats. This procedure, if carried out on an extensive scale, may mean a considerable shrinkage in the area under Wheat. Hay and straw will not be plentiful, though roots may prove to be so. Cakes are still too high in price to make feeding very remunerative, so the prospects for the stock owner are only of a moderate nature. What about the corn markets? Oats will make a fair price, and may get to be dear if the foreigner only stays away.

The high price of Maize must have an effect on the Oat trade. Wheat has not varied much for some time, and we hardly think there will be any great alteration of price at present. The price is too low, but it has been much worse, and might be again. Our hops are set on Barley; there is a great deal of fine colour amongst this year's Barley, and if farmers will but see that it is carefully threshed and dressed we are confident that there will be a run on English malt. There does not appear to be any reason for early marketing, except monetary ones, and the evil of having too many eggs in one basket. Altogether the year seems to be one over which we can neither exult nor lament, but be quietly satisfied.

Work on the Home Farm.

Another fine week has enabled us to make capital headway with working the stubbles, and they are now rolled and harrowed for the last time, and will remain in their present condition until ploughs can be provided to turn the land over for the winter. Lea is still too hard, and the recent 0.25 of rain will not have much effect, though it has freshened Turnips wonderfully. Swedes would do with much more, in fact a really good soaking. Patches of the bluish aphid which we generally call Smother-fly, have made their appearance, and if we have much hot weather this month they will spread and do much damage.

The lambs, having had the bulk of the Cabbage fed to them on seeds or stubbles, are now being folded on the Cabbage break to pick up the crumbs that are left. The crop has not been a very satisfactory one, the plants having hearted somewhat prematurely and attained but a moderate size. We are inclined to blame the dry season for this, but have a suspicion that there is another contributory cause—*viz.*, a scarcity of good suitable muck twelve months ago. Cabbage must have high feeding, and no food except muck is of much use during very dry weather. It is necessary, therefore, that we should endeavour to give next year's crop a better supply unless we wish to risk a repetition of this year's experience. Twenty loads per acre is not too much, and the land having been well cleaned, there is no reason why it should not be spread now and ploughed in immediately. Three horses and a chilled plough will turn it in 9 inches deep and do the work well. The plants will not be put in until late October, but if the land becomes solid again before then it will be all the better for them.

A good deal of threshing is being done. Perhaps the country banks could tell the reason why. No doubt money is scarce amongst farmers, but straw is equally so, therefore the demand for steam threshers is very active. Reports speak well as to the yield of Wheat; very well when the shortness of the straw is considered. The few results of Barley threshing are not so good. The samples are of good colour, but small and very flinty. With more straw to thresh there is a better yield than that of last year, but quality and weight are much the same, too much the same.

Beef markets do not encourage immediate selling of fat or very fresh cattle, but pastures are going off, and to keep the animals thriving cake must be given if they are not already having it. Cattle never give a better return for the cake they consume than they do during the next six weeks.

Another Tuberculosis Commission.—The London Gazette recently announced that the King has appointed a Royal Commission to inquire (1) whether the disease (tuberculosis) in animals and man is one and the same; (2) whether animals and man can be reciprocally infected with it; and (3) under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission. The members of the Commission will be Sir Michael Foster, Professor of Physiology in Cambridge University; Dr. G. Sims Woodhead, Professor of Pathology in Cambridge University; Dr. Sydney Harris Cox Martin, Professor of Pathology, University College, London; Mr. John M'Fadyen, Principal of the Royal Veterinary College, London; and Mr. R. W. Bryce, Professor of Pathology at University College, Liverpool.



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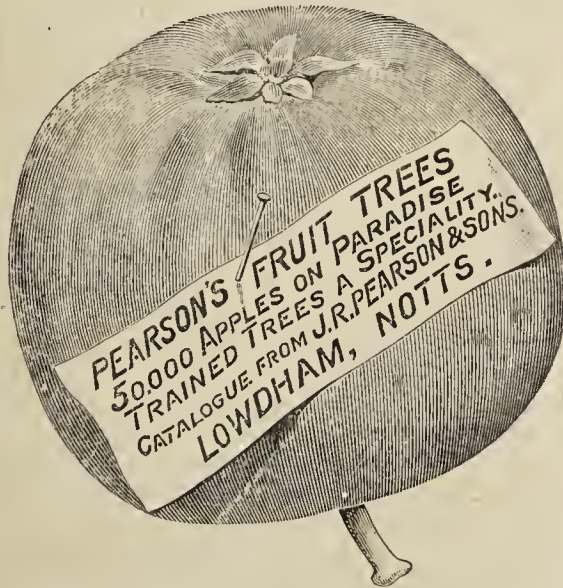
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Journal of Horticulture.

THURSDAY, SEPTEMBER 26, 1901.

"The Fruits of the Earth."

SEPTEMBER at its best is indeed a
glorious month, for the heat of
summer has departed and the cool
nights and stirring breezes bring
back to the human frame vigour
and freshness. To the gardener in
such a season as the present it is a
time of joys, activity, and watchfulness, for
in the fruit garden Apples, Pears, and Plums
of various hues are weighing down the branches
with their harvest of luscious fruit. All of these
need watching, so as to gather them in the "nick"
of time for present consumption, or to store for
future use. How the recent rains have freshened
the trees, causing the fruit to increase in size, and
to gain a more brilliant colour. Truly the fruit
crop is an abundant one, and on all sides we hear of
"glutted" markets, but the grower who keeps pace
with the times and grows choice varieties well has
not much to complain of. In years of plenty soft
fruits are bound to glut the markets at times, and
then it is that the growers of such common Plums
as Pershore and White Magnum Bonum are badly
hit. If half the trees of these varieties in the
country were grafted with Monarch and Early
Rivers, they would soon repay the owners for the
loss of a few seasons' crops. But the time of
plenty will soon be over, and those who have
abundance of fine Apples and Pears to store will,
I fancy, at the end of the season, have reason to be
satisfied with the result of their year's labour.

Crops have been so heavy this year that unless
the fruit on old trees was thinned it will be small.
Young vigorous trees seem to be able to carry a
heavy crop and yet bring up the fruit to good size,
in fact a heavy crop is exactly what some vigorous
trees require to check their strong growth and
bring them into a fruitful condition; it is quite as
effectual in this respect, and more profitable, than
root-pruning. At this season of the year it is
wise to make a careful survey of our fruit trees,
and note down the condition of the numerous

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Publication, officially to "THE EDITOR," at
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address.

varieties, in regard to their cropping qualities and general behaviour. If this is done each year such notes must prove of great value, and their value will be greatly enhanced if we can also visit other localities, compare the results which well known varieties exhibit under various conditions. Gardeners, when taking a new charge, are apt to rely upon the sorts which succeeded well in gardens where they formerly practised, but it is a well known fact that some varieties succeed splendidly in certain districts, but are comparative failures in others. A short time ago I spent a few pleasant hours in conversing with a gardener and fruit grower of great experience, who has practised in many counties, but in his present position he gives a very poor account of Bramley's Seedling, averring that with him it seldom crops well. Now I have always found this to be one of the finest and surest croppers among late varieties when grown as a standard and given plenty of room. Gascoigne's Scarlet Seedling is another variety of which my friend fails to grow good crops, but as I write I have before me a splendid bush tree loaded with exceptionally fine fruit, and the same tree has borne heavy crops during the last few years, and yet continues to make plenty of growth. This to my mind is a great point in its favour, for while some varieties, such as Stirling Castle and Lord Suffield, become stunted in growth as soon as they crop freely, Gascoigne's retain vigour enough to grow heavy crops to full size. I ought to add that the soil in which my friend's trees are grown is considerably lighter than that in which the fruitful bush is growing.

In the case of any strong-growing young trees which have failed to bear a good crop for two or three years, root-pruning should be resorted to. Such should at the present time be marked, and at the first opportunity during October or November have a trench taken out around them and a few of the stronger roots severed. If this is done before the leaves have fallen young roots will quickly form after the trench is filled in. When once the trees are brought into a fruitful condition by such means, root-pruning is not often again necessary, except in the case of bushes or trained trees pruned on the restriction system. But I have wandered somewhat from the ideas I had in mind when I started to pen these notes. I then intended to treat of the condition of various popular kinds of Apples and Pears, as I have grown or seen them this season in the midland counties, but as my pen ran on I could not forbear from dropping a timely hint about the necessity of root-pruning, for just at this season one can judge to a nicety which trees really need it.

Among early Apples two varieties have proved especially valuable for market purposes, as their high colour has insured a ready sale; I refer to Devonshire Quarrenden and Worcestershire Pearmain. Both have cropped well, and although the former is not one of the most regular croppers, it ought still to be planted in both private and market gardens, as it is good in flavour, and, though small, most attractive in appearance when well grown. Beauty of Bath has borne heavy crops of handsome fruits, but one cannot speak very highly of its flavour, and the two varieties previously named are bought up more readily in the markets. Bismarck, The Queen, and Warner's King, for supplying fine culinary Apples from the end of September till the end of November; the above are a grand trio, that ought to be grown in every garden. They are heavy and consistent croppers, and Bismarck is a rosy and particularly handsome fruit. I have recently met with many fine bunches of each, that were carrying heavy crops of very large fruits, and in each case the owners lamented the fact that they had so few trees of these varieties. The market man should plant them largely, for although they come in competition with Canadian Apples, their size and appearance make them successful competitors. Cellini, Beauty of Kent, and King of Tompkins County are also handsome, which have this year borne very heavy crops. The first of the trio ought to have the fruits thinned early in the season, otherwise they will not swell to nearly their normal size. Allington Pippin proves to be a sterling dessert kind for November and December use; all exhibitors should certainly grow it, as it attains to a large size and is of an attractive appearance. Of the good qualities of Cox's Orange Pippin I need say nothing, as everybody esteems it for dessert purposes, but if I mistake not it has not often borne so good a crop as this year. Lady Sudeley, New Hawthornden, Lane's Prince Albert, Lord Derby, and Newtown Wonder are varieties which have fully sustained their good cropping qualities.

In regard to Pears, my decided opinion is that it is years since we had so good and abundant a crop generally. Why Pears are not more largely planted for market purposes is somewhat of a mystery, seeing that even in times of glut they command a far better price than Apples. There are plenty of fine varieties which succeed splendidly as pyramids and bushes, and why catalogues should state that so many of them require a wall is somewhat puzzling. As an example let me take Thompson's, one of the best flavoured Pears in existence. Not a hundred miles from Birmingham I know of a gigantic tree which is roped with fruit to such an extent as I never before saw a tree, and they are as clean and promising in appearance as anyone could wish. I firmly believe that the tree will yield 40 bushels of fruit. Marie Louise d'Uccle, Marie Louise, and Josephine de Malines, also do well

as pyramids. Beurré d'Amanlis, Pitmaston Duchess, Beurré Diel, Beurré Bosc, Louise Bonne of Jersey, and Emile d'Heyst, will all succeed as standards or pyramids in the warmer districts of the midlands where the soil is deep and well drained. I have met with large trees of each of these varieties carrying splendid crops this season. Williams' Bon Chrétien and Jargonelle, almost everybody knows, are splendidly adapted for the same form of culture. With branches thinly disposed the fruit ripens well, and there is usually not much to complain of on the score of size when the necessary feeding receives due attention. All trees when they have set a heavy crop ought to receive a good coating of manure if none was applied during the previous autumn or winter.

A long time will elapse before all the "gifts of the earth" have been "safely gathered in," but the ruddy glow and golden tints of handsome fruits will assuredly be lavishly displayed in the churches and chapels of our land at this festival time, when our thanks and praise are rendered to the "Giver of All."—H. DUNKIN.

Gardening at Hoxton in Olden Times.

HOXTON was a favoured home of some of the most noted gardeners in the seventeenth and eighteenth centuries. One of the earliest of these was Gourle, who flourished in the reign of Charles II., and whose name has come down to us in an anagrammatic form attached to the Nectarine he successfully raised—viz., the Elruge. George Ricketts, Pearson, and William Darby are all three mentioned in Gibson's curious account of gardens near London, in December, 1691. Ricketts cultivated more than 190 kinds of Tulips, and he possessed the richest and most complete collection of flowering trees and shrubs in the kingdom; Pearson had the best assortment of Anemones about London, and sold "them only to gentlemen;" and Darby was known as one of the first in England to cultivate exotic plants. He was succeeded by John Cowell, in whose garden flourished the Cereus and the Glastonbury Thorn. A great American Aloe was bought by Darby when it was twenty years old, and it remained in his garden for forty years, after which it came into Cowell's possession. When it was seventy-two years old it began to open its crown for flowering, and in June, 1729, it flowered magnificently. Large numbers of visitors were drawn to the gardens to see this curiosity.

Another noted Hoxton gardener was Benedict Whitmell; but the most distinguished of the fraternity was Thomas Fairchild, who, by the judicious bequest of the small sum of £25, has succeeded in preventing his name from ever being forgotten. Fairchild united a love of science with the practice of his art, and contributed a paper on the motion of sap in plants to the Royal Society, which was printed in the "Philosophical Transactions." His grounds were afterwards known as Selby's Gardens, and extended from the west end of Ivy Lane to the New North Road. Here he cultivated a vineyard as late as 1722, which is said to have been one of the last in England.

Fairchild, by his will, dated February 21st, 1728, "gave and bequeathed to the trustees of the charity children of Hoxton, and their successors, and the churchwardens of the parish of St. Leonard, Shoreditch, and their successors, the sum of £25, to be by them placed out at an interest for the payment of 20s. annually, for ever, for the preaching of a sermon in the said church of St. Leonard, Shoreditch, by the lecturer of the said parish, or such other person as the said trustees and churchwardens and their successors should think proper, in the afternoon of the Tuesday in every Whitsun week in each year, on some subject relating to natural history." Among the noted men who have delivered the lecture may be mentioned Dr. Stukely; the Rev. William Jones of Nayland; the Rev. Samuel Ayscough; and Dr. Wilberforce, when Bishop of Oxford. In 1750 Stukeley made a note in his journal of a visit to hear the lecture; and as the passage gives us a picture of the state of the neighbourhood of Hoxton at that date, we will quote it here:—"I went with Dr. Folkes and other fellows to Shoreditch, to hear Dr. Denne preach Fairchild's sermon on the Beautys of the Vegetable World. We were entertained by Mr. Whetman, a merchant, at his elegant house by Moorfields, a pleasant place, encompass'd with gardens, stored with all sorts of curious flowers and shrubs, where we spent the day very agreeably, enjoying all the pleasures of the country in town."

Hoxton was once noted for balsamic wells, and a book was written upon them. Sir Philip Skippon, writing to Ray (December 13th, 1667), refers to "the sweet-smelling earth found in Captain Massey's garden, at Hogsden;" and eighteen years afterwards Sir Hans Sloane, in a letter to Ray (November 10th, 1685), gives a full account of the earth, and an analysis of the water found "near the new square at Hokesdon." Whatever charms Hoxton may once have possessed, they are all gone now, and yet not a great number of years ago, a London merchant purchased ground there, and built himself a house, which was finished, and fitted up with an elegant conservatory.—HISTORICUS.

*Lælia harpophylla.*

WE call attention to this showy species at the present time, that its claims may not be quite overlooked by those who may have seen it in flower about the springtime of the year, and determined then to add it to their collections, or secure more of it if they already have it, which is more than likely. Few Orchids are more charming. Of course there are a number whose flowers approximate in colour to those of *L. harpophylla*, yet the colour—bright cinnabar-red or orange-vermilion—is very telling, and always has a tone of freshness and rarity with it. *L. harpophylla* has been in our gardens for thirty years or thereabouts, and is amongst the most popular and easily grown species the amateur or beginner in Orchid culture could select.

The Week's Cultural Notes.

DECIDUOUS *Calanthes* of the Veitchi and vestita section should still be allowed ample room between the plants. Very often they are placed close together and the foliage is crowded, consequently it soon loses colour and drops, failing, of course, to carry out its proper functions. Weak flower spikes and flowers of poor colour are sure to result. If the plants are kept well clear of each other, so that air and light reach every part of them, the foliage remains on longer, and only fades and drops in the proper and natural course.

The feeding of this class of Orchids is a question that has been often argued, some very successful growers inclining to the opinion that it is best left alone, others using liquid manure freely. As the plant is epiphytal in its nature it would appear quite unnecessary, but if by feeding we can get twice the size of pseudo-bulbs and larger flower spikes, then it is worth while. But it is well to keep in mind that very large, plethoric bulbs are usually the first to be attacked by spot, and a medium course is best. When the roots have obtained a thorough hold of the compost a few weak doses of liquid manure are helpful, but it is better left alone altogether than overdone in the least.

In the cool house the pretty *Pleione lagenaria* or Indian Crocus will be in flower or showing for flower. The grower must be on guard, and as soon as the flowers are past the plants must be repotted. If they are left, only for a few days, the young roots will appear at the base of the new growths and the disturbance will not be to their liking. Caught just at the right time the roots enter the new compost freely and the plants do well. Very little water is necessary after repotting, none at all, in fact, until the roots start, and the compost may consist of equal parts of peat fibre, loam, and chopped sphagnum moss.

The morning ventilation now requires more care, as a chilling draught may easily be set up by lifting the ventilators too much. Just a chink in the morning, increasing it by degrees if the day turns out bright and warm, is all that is required where tropical Orchids are grown, but on the cool house more may be given. Disas, *Odontoglossums*, cool *Oncidiums*, *Masdevallias*, *Lycastes*, *Maxillarias*, and the

large-growing *Cymbidiums* delighting in the fresh buoyant atmosphere thus caused. As in every other cultural operation judicious management leads to the best results.

Odontoglossums.—(Concluded from page 216.)

O. Andersonianum and *O. baphicanthum* are very similar plants, both presumably of natural hybrid origin. They are very variable, the ground colour usually a pale yellow with spots of chestnut brown and red. *O. bictonense* is the oldest species in the genus, and is interesting on this account, while its free flowering nature renders it acceptable in a representative collection. A beautiful species is

O. blandum, at one time extremely rare, and none too plentiful even now. The erect spikes bear many flowers, these being white spotted with purple. *O. Cervantesi* is a little gem, thriving best when hung up close to the roof in pans of peat and moss. The flowers are white and marked in a transverse manner about the centre with purple. In some of the better forms these markings cover almost the entire surface, notably in the beautiful *O. C. punctatissimum*.

O. cirrhosum is a very elegant plant, the spikes rising gracefully to a considerable height, and then branching laterally. The segments are all much narrower than those of most species, and are pure ivory white with maroon spots. *O. citrosimum* is a well known plant, remarkable for its perfectly pendent flower spikes, which render the use of some hanging receptacle imperative. It likes rather more heat than most of the species, plenty of water while growing, and from the time the growth is made up in autumn until the flower spikes show in spring, no water must be given. Though in some cases the plants will shrivel considerably, they soon plump up again when water is applied.

O. crispum is one of the most generally grown Orchids in existence, and certainly one of the most beautiful. Its chaste blossoms may be had for over six months out of the twelve, and they are extremely variable both in size and colouring. Although ordinary forms are very cheap, good varieties fetch very high prices. A pure white form, *O. c. virginale*, is in cultivation, but is rather rare, and there are many lovely forms in the rose tinted section. Those with white ground are valued according to shape and colouring, a broad well-filled up flower with large bold blotches being considered the best. Quite distinct from all these is the purple flowered *O. Edwardi*, a pretty plant from Ecuador with spikes rising a couple of feet high, the flowers small but showy, and delicately scented.

O. grande is a superb plant, easily distinguished by the large yellow spotted flowers that are produced on stiff erect spikes. From their bold rich colouring the species has been termed the Tiger Orchid. This and the nearly allied Mexican species, *O. Schleiperianum* and *O. Insleayi*, like a rather higher temperature than the *crispum* set, but if this is not at command they get along very well together. The Cattleya house, though sometimes advised, is really too

hot for them. *O. Halli* is a variable and pretty species deserving of every attention, while the newer *O. Harryanum* is a very striking and handsome plant. The sepals and petals are yellow, almost covered with chocolate brown blotches, and the lip is a pretty combination of white, yellow, and purple.

O. Krameri is a small but pretty plant, with flowers of a pleasing mauve shade, becoming nearly white at the tips of the segments. There is also a white form of it, which makes a fine companion to



LÆLIA HARPOPHYLLA.

the type. *O. luteo-purpureum* is another very variable species, many varieties of which have been given specific rank by some authorities. It must be considered the easiest of all to grow, and is very free. *O. Pescatorei* is perhaps the greatest rival to *O. crispum*, which it very much resembles, the principal difference being in the shape of the lip, while the flowers in the majority of cases are smaller. It is a lovely plant in all respects.

O. pulchellum is a small white flowered species, very pretty, and sweetly scented, while the useful *O. Rossi* would doubtless be thought a lot more of were it less plentiful. The flowers of this are very freely produced over a long season, and some of the larger and richer coloured forms of it are excellent Orchids. The splendid *O. triumphans* must not be forgotten, its large bold yellow flowers, spotted with chestnut brown, making it a favourite everywhere, and although there are many other beautiful plants in the genus, those named will make a very interesting collection.—H. R. R.

Early Grapes.

THE most reliable and advisable method of securing a supply of thin skinned, fresh ripe Grapes early in spring, which are a necessity in some establishments, is that of forcing the Vines specially prepared for the purpose in pots. The best varieties I have tried are Royal Muscadine, White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court. To secure satisfactory results the canes must be brown and hard, as stout as walking sticks, and with eyes like Hazel nuts. But the great evil in early forcing Vines in pots or anywhere is overcropping, the berries not attaining the size and perfection of colour and finish so essential to their high appreciation. Where bottom heat can be given to start the Vines, they will show their estimation of it, and the constant soft glow of moisture given off by the fermenting material, in breaking freely. It is desirable to stand the pots on brick pedestals, placing the bricks loose and so high that the rims are slightly higher than the pit edge, the arrangement being such that the pots will be in the centre of the bed, which should be about 3½ or 4 feet wide, and as much in depth. Leaves being placed in to fill the pit, a gentle warmth will be afforded the Vines, and the roots will pass from the pots into the leaves, deriving support beneficial to the health of the Vines, swelling and perfecting of the Grapes.

To have Grapes ripe at the end of March or early in April, the Vines should not be started later than the early part of November, and they ought to be placed in position by the middle of October, so that they may have about a fortnight of preparation in the way of admitting air freely above 50°, this being secured by artificial means, and then the sap will become quickened, ready for starting the Vines away strongly when forcing proper commences. The canes must be depressed to a horizontal position, or lower, to insure their breaking the buds regularly. Damp the canes in the morning and afternoon, but not keeping them constantly dripping with water. In an atmosphere kept at a temperature of 50° to 55°, the buds will soon begin to swell, then gradually raise it day by day to 60° to 65° when they are breaking, allowing an advance of 10° to 15° from sun heat. The temperature at the base of the pots ought not to exceed 75°, and it is better to commence with 65° about the pots, and increase the warmth as the growth advances. Water must be given very carefully at first, suffice that the soil be kept evenly moist, not in any case wet, as this retards rather than forwards root formation, and it is only when the Vines have leaves and evaporate largely that plentiful supplies of water are required.

Early Forced Planted-out Vines.—The Vines that are to furnish ripe Grapes with certainty next April should be started by the middle of November. It is not an advisable procedure to start Vines permanently planted at so early a season. Very early forcing places a great strain on them through their having to make growth when the natural conditions are at the worst for elaboration and assimilation, and to rest at the hottest part of the year, there being danger of collapsing from attacks of red spider, or ripening too early from climatic conditions. This may cause the buds that are to furnish the next year's crop to start into growth at the time the Vines should be resting. It can only be avoided by retaining some lateral growths as an outlet for the sap which the roots absorb, and it will not do any harm, but good, by securing a considerable amount of stored matter, always provided the lateral growths are not allowed to interfere with the free access of light and air to the principal leaves. These laterals should be removed gradually and continually from late August until early September, so as to admit of the Vines intended for starting early in November or December, by, or soon after, the middle of September being pruned, and they will not bleed, nor will the buds start into growth if the house is kept cool and dry. There is no need to wait until the leaves are down, as the resting having set in, there will not be any upward flow of sap; but bear in mind this must have been secured by the gradual reduction of the laterals, and the resting apparent, otherwise

the forming buds may start. If not already pruned, lose no time in pruning, always at least a month or six weeks in advance of starting, the beginning of October being late enough for Vines to be started early in December, not deferring it beyond the time the foliage commences to fall, so as to give the Vines a few weeks' rest.

Outside borders are a great mistake in early forcing Vines, especially Muscats, and whether heated below by hot-water pipes, or above by fermenting materials, not nearly equal to due internal provision for the roots. Still there are such borders, and have to be made the most of, or the Vines in them. The old practice of shielding them from the heavy autumnal rains by spare lights has not been improved upon, as it lets the border have the benefit of any sun that may appear, and that without depriving the soil of air. Thus later on the border can be covered with a good thickness of dry leaves or fern, with some litter on top, so placed as to throw off some of the wet, and the heat thus covered up remains most of the winter. Where there may be plenty of leaves and stable litter, the well tried practice of keeping out cold and getting some warmth into the border by placing them on top, renewing them from time to time, answers as well as ever. But I do not advise such procedure where better conditions obtain, yet adaptation to circumstances is a fine thing, and marks the cultivator as successful or otherwise. The very old practice of using fermenting material inside early forced houses has not been bettered, as ridges of sweet fermenting material always give off heat, moisture, and nutrition, favouring good breaking and development of the growths, besides saving fuel. In the heap fashion ridges like outdoor and indoor Mushroom beds, for a very successful Grape grower uses the stuff for growing Mushrooms, and then spreads the beds over the border as a mulch for the Vines. Three parts of leaves, Oak or Beech, and one of stable litter, thrown into a heap a week or ten days before being placed in the house, get warm, then placed in ridges about a yard wide, and nearly as much in height, on the border, soon become hot, and then turned a time or two, give out all the heat that starts the Vines, and the beds are spawned, earthed, and anon lots of Mushrooms appear, so there is a sweet air for the Vines, as the Mushrooms give out carbon after they start, and the roots come into the sweet material. The whole thing means abundance of nitrogen, for the old spawn decays along with the manure, prime stuff, rich in potash as well as organic matter, speedily passing into ammonia, and with occasional sprinklings of basic slag, phosphate, and double sulphate of potash and magnesia in mixture, soon gets into nitrates, and, better, into the Vines. This may be a wrinkle for someone hard set to make ends meet; anyway, I advise the ridges of fermenting material in early forced vineries, always using that rare article, discriminative judgment, where there are plants, sweetening the manure properly, or the foliage may be seriously injured instead of benefited by ammonia vapour given off; therefore mix well together when thrown into the heap, damping the material if dry, turning when getting warm, again damping if necessary, and when well warmed through they are fit for placing in the house.—G. ABBEY.

Book Notice.

"The Gardener's Assistant."*

WITH rather more promptitude than obtained with the fore-published volumes, this fourth book of the series has appeared. The contents embrace the culture of Apples, Pears, Plums, Damsons, Peaches, Nectarines, and every operation from the selection and formation of a suitable orchard down through planting, staking, pruning, spraying, and cleansing of the various trees or bushes. The seldom practised operation of fruit-tree spraying has had one solid chapter devoted to its consideration. The author refers to the devastation amongst fruit trees caused by insect and fungus pests during the past quarter of a century, and attributes these attacks to ill-chosen sites, over-manuring, or, on the other hand, poor cultivation, that is, starvation, and other causes that are patent to the thoughtful. The inventions in the form of knapsacks, &c., that from time to time have come into use, with a side review of how our Canadian and American congeners and practitioners have vigorously applied themselves, both in the employing and improving of spraying machines, have their merits discussed, and a number of illustrations of spray-pumps and spray-carts accompany the text of this exceedingly interesting and valuable chapter. This is the first publication in England that has so thoroughly brought spraying to notice, or so fully described the working and advantages to be derived from it. How often, when eating home-grown Apples, do we suffer disgust by finding the larvæ of the Codlin moth in the core? Very frequently, indeed, is our own experience. It is only by spraying at the proper season that the female Codlin moth can be prevented from laying her eggs on the flowers or ovaries.

As we have stated in our former reviews, Mr. Watson has taken the

* "The Gardener's Assistant; a practical and scientific exposition of the art of gardening in all its branches." New edition, revised and entirely remodelled, by William Watson. Divisional—Vol. iv. Price 8s. London: The Gresham Publishing Co.

pains to write up a short history of the evolution of all the important genera or classes of plants included in "The Gardener's Assistant." The Apple has fifty-five pages of descriptive and other matter devoted to it. Sub-chapters on the evolution, systematic improvement, inter-pollination and fertility, treatment of diseases, and full cultural details are furnished. Along with the text are numerous illustrations portraying, for instance, an Apple parer, corer, and slicer; an "American" evaporator; forms of Apple trees; how to prune and plant; storing trays and figures of store-rooms, and how the latter can be made. The list of varieties embrace 166 that are fully described, while many are illustrated. Following this alphabetical descriptive list are selections of the best varieties for special purposes.

It is gratifying to notice that in the present volume every figure has a reference to its approximate size by signs, as $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, according to the natural size of the subjects and the illustrations of them. The formation of the kitchen garden is included in volume iv. So highly do we value this new issue of "The Gardener's Assistant," that we would strongly urge gardeners and lovers of the garden, both young and old, to determine on adding the volume to their library so soon as they can.

A Chat About Lilies.*

(Concluded from page 263.)

L. chalcedonicum is one of the most distinct Lilies, the flowers are of bright saffron-wax scarlet, much recurved, distinct from any other Lily, and if kept clean and cultivated will increase easily. *L. Pomponium* is also a bright scarlet Lily, but much dwarfer, quite easy to grow. *L. rubellum* is said to grow well under similar circumstances, but I have seen it fail repeatedly, probably through insufficient care in commencing with imported bulbs. Of *L. Martagon*, three or four forms may be easily established, the old purple kind being much the hardiest, and will, when established, propagate profusely in the ordinary herbaceous border. The double form of this interesting Lily is sometimes met with, but it has nearly died out. *L. M. album* is distinct and easily grown, as is *L. M. dalmaticum*.

When first planting the soil should be well tilled, and if heavy loam, leaf soil and sand should be added immediately around the bulbs, which should be carefully watched as the young growths appear, to protect them from the ravages of slugs and snails. Copious waterings should be afforded as the plants grow, to enable the roots to ramify and get firmly hold of the soil. Section 2 comprises those varieties succeeding best in deep damp vegetable soil, requiring rather more preparation for the reception of the bulbs. In a general way the soil should be excavated to the depth of 2, to 2½ feet, well broken up at the bottom, and the holes filled to within 9 inches of the surface with a compost of one part peat, two parts leaf mould, four parts loam or turfy loam if procurable, well chopped up, and a good sprinkling of sharp sand or grit mixed with the whole. The crown of each bulb should be placed on the firmly trodden soil, with a handful of sand around and under each; fill in to the surface with more of the same mixture, and if manure is added it must be well decayed, and must not touch the bulb. Press firmly, but not too hard, and during winter and spring mulch liberally with well decayed straw manure. Water copiously during dry weather in spring and summer, and cover the bed with cocoa-nut fibre.

Liliums for Damp Soils,

I will enumerate a few, but many more will succeed in such soil, more especially if dwarf shrubs are planted amongst them to afford shade at the roots, and if the bed is situated where the sunshine is somewhat broken by trees at a short distance, many more species may be successfully grown. Carefully plant in the first place, and very great benefit is also derived by mulching, in order to cover the stem roots which most Lilies make above the bulbs. The various forms of *L. auratum* come first in this section, and a more noble sight than a bold healthy clump of this grand Lily cannot be imagined. They often attain the height of 10 feet, and will sometimes develop as many as twenty flowers on a single spike. If three or five bulbs are planted in one group the effect is in proportion. The grandest of all is perhaps *L. a. platyphyllum*, it has enormous flowers and broad rich leaves. The colour is nearly pure white with a broad band of yellow running down the centre of each petal, heavily spotted crimson, and of great substance.

L. a. rubro-vittatum has a very heavy band of crimson in each division, and is heavily spotted with the same colour; it is a very striking flower. *L. cordifolium giganteum* will also do well if sufficient moisture is afforded and partial shade assured. Without this it had better be planted with section No. 3, which is its true position. *L. Krameri* is a choice looking species. *L. Humboldti* grows 6 feet high, and produces fifteen or sixteen to twenty flowers on a spike, being yellow, spotted with a crimson shade; *L. H. magnificum* is a fine form of this. *L. Henryi*, said to be allied to *speciosum*, grows 5 feet high, and has twenty to twenty-five pure yellow

speciosum-formed flowers. *L. Hansonii*, another yellow flowered species, with Martagon-like flowers, is also a choice looking Lily.

The new hybrid Burbanki will prove to be of easy culture when sufficiently fixed and more accurately selected. *L. sulphureum* (*Wallachianum superbum*), with large trumpet flowers of a soft yellowish shade, tinted on the outside with purple, is also a very splendid Lily, and might be easily grown if heavily mulched in winter.

Bog Liliums.

No. 3 section is composed entirely of those species which choose for themselves, when growing naturally, boggy or very wet situations. An artificial bog might easily be arranged to meet their requirements, but care must be taken to arrange so that the moisture does not become stagnant and sour. It is better to plant them in drier soil, slightly elevated, and the roots to reach the water as they require it, than to plunge bodily into very wet soil. Plenty of drainage, sharp sand, brick rubbish, and grit should be used when making the site for the swamp-loving kinds. In their native habitats they grow principally on the margins of streamlets with moving water below them, or if in swamps drainage is assured by the roots of other plants, and by their growing on somewhat raised knolls. Peat and leaf mould, with a little loam, turfy if possible, roughly broken up, well mixed with grit or coarse sand, is the best compost for these. Perhaps the best are:—*L. giganteum*, already described; *L. Grayi*, a comparatively new North American species; *L. pardalinum* and allies; *L. canadense*, and its variety *rubrum*; *L. Humboldti* and *Bloomerianum*; also *L. Parryi*.

The chief enemies to Lilies, when growing in open beds or borders, are snails and slugs; sometimes green fly attack them badly also, but can very easily be prevented if taken in time. To protect from the former, more especially when the young growth is just starting, I should recommend strips of zinc gauze, about 5 inches or 6 inches wide and of various lengths, fastened at the ends to make a circle. If these simple protectors are placed round the clumps early in the spring it will prevent these pests from destroying the succulent young tops, of which they are very fond. Green fly may be prevented largely by seeing that the plants are not checked in any way, affording plenty of moisture at root, and if the weather be particularly hot and dry the surroundings should be damped down frequently. An aphid brush should always be handy, so that if the insects should appear they may immediately be dislodged before gaining strength or doing damage.

The Lily disease,

of which we often hear some mention, and also see its effects, can, I believe, in most cases be prevented, or easily checked, if taken in hand in time. The fault is chiefly in the bulbs not having been carefully looked over and cleansed when planted, or, through too late planting, they have become impoverished. Manure, if fresh, will easily cause spot on the bulbs if allowed to touch them. When badly affected, the best cure I know of is to lift them immediately they have died down, thoroughly cleanse them, cutting out any affected scales and carefully rub them in charcoal dust after having first washed them in clear water. Sulphur might be used, as this is the best of all fungicides, and if thoroughly cleansed of all "spot" and decayed matter, its sterilising properties is, I think, on the whole, the best for use. Newly imported bulbs, more especially, should be carefully examined for "spot," and any scales so affected should be removed and treated with the charcoal dust. Home-grown bulbs would be best planted as soon as they are dormant, but will do later; the sooner the better, however.

Imported Bulbs.

So soon as these are received, carefully trim and clean all spotted or damaged parts, treat with charcoal dust, and place in damp cocoa-nut fibre until roots are on the point of starting, when they may go into their quarters. Another plan is to pot them into small pots and wait until the growths are 3 or 4 inches high, when they are carefully transferred into the places assigned to them; it is of great importance that none of the roots are injured in the operation. The latter plan is probably the best for such varieties as belong to section 3, as it is possible that dormant roots may be injured if placed suddenly into a very damp position out of doors. All Lilies in exposed positions should be carefully staked before they need it; bamboo canes, for appearance sake as well as strength, are best for the purpose.

We have thus seen that to be successful in Lily culture out of doors, we have to consider, firstly, the locality from which they come originally and their position when thriving there; secondly, that the bulbs are carefully and thoughtfully handled when received, more especially when newly imported, that they are intelligently planted in proper positions and suitable soils; thirdly, that pests of all kinds are combatted before damage is done; and, lastly, most important of all, care must be used in proper shading the roots from the burning rays of the sun in early summer, that they are well mulched to protect the bulbs in winter and the stem roots in summer, and that they never want for water, more especially sections 2 and 3. Most Lilies are improved by liberal watering with weak liquid manure, especially soakings of farmyard fluid, but strong fresh manure should be avoided.

* An essay delivered before the Shirley Gardeners' Mutual Improvement Association by Mr. E. Ladhams of Shirley Nurseries, Southampton.



Outdoor Varieties.

To the raisers and introducers of the many varieties of early flowering Chrysanthemums all garden lovers owe a debt of gratitude, for by planting them freely we are able to have hosts of delightful flowers in the open air during the autumn months. In large establishments such flowers are highly prized, not only for the brightness they contribute to the outdoor garden, but also for their value in a cut state for various decorative purposes. Last year the weather was so favourable during the autumn months that late varieties, such as W. H. Lincoln, Princess Teck, and Rose Trevenna, flowered splendidly in the open air almost up to the end of the year, and for the sake of prolonging the supply of blooms during favourable seasons it is always wise to have a few late sorts in the open air, but they should always be planted in sheltered positions, so that when a little artificial protection is given they will be uninjured by 6° or 7° of frost. The front of a south or west wall or building is, therefore, an excellent position for late varieties.

The bulk of plants intended for flowering in the open air should, however, be early flowering varieties, because during the majority of seasons we may usually rely upon their having completed their flowering before sharp frosts occur; but even in the case of early flowering varieties it is always wise to provide against contingencies. Sometimes we get one or two sharp frosts early in October, which ruin the buds when no protection is given. Such frosts may be followed by weeks of mild pleasant weather, and the cultivator who neglects to give the timely attention during those two critical nights loses the reward of a year's labour, while those who protect at the right time enjoy an abundance of flowers for weeks. When Chrysanthemums are planted in bed, or quarter to themselves, a neat framework should, if possible, be erected over them at this season. It is then but the work of a few minutes to enclose them with thin canvas whenever frosts are likely to occur, or when the dews are very heavy; and by such means the flowers are safely preserved from injury by frost or damp.

Plants grown against walls or fences are easily protected by placing poles against such boundaries, and then by the aid of a few nails or hooks fastening canvas over them. When isolated plants are distributed over various parts of the garden, a simple and effectual method of protecting them is the following:—Drive a strong stake in the centre of each plant, letting the top of the stake stand a foot above the top of the shoots; to the stake fasten a strong ring of wire, over which thin canvas can be placed, so as to hang over the sides of the plants.

Plant Protector Wanted.

It seems to me that a cheap plant protector is wanted, and that there is at the present time a splendid opening for the manufacturer who will come forward with cheap, light, plant protectors. A light wire frame covered with glazed paper would form a sufficient protection for Chrysanthemums at this season of the year, and for hosts of other plants during the spring months.

Nearly all the early flowering varieties are worthy of being grown in the open air, but I will enumerate a few, which I know from experience to be particularly good. Ambrose Thomas, reddish chestnut; Admiral Avellan, pure yellow; Aurore, bright red; Bouquet de Feu, terra cotta; Comtesse Foucher de Cariel, orange bronze; Coral Queen, Crimson Marie Masse, bronze; Queen of the Earlies, a grand white; Harvest Home, bronzy red; Ivy Stark, orange yellow; Lady Selborne, white; Mrs. Hawkins, yellow; Mytchett, white; Mytchett Beauty, a grand yellow; O. J. Quintus, mauve pink; Rycroft Glory, yellow; Thos. Ball, deep orange; and Yellow Selborne. All the above are large flowering varieties. The Pompons are also a delightful class to grow in the open air, and their flowers are not so easily injured by rain as those having large flowers.

All the pompons given below are free flowering and attractive in appearance. Alice Butcher, orange and red; Bronze Bride, Canari, yellow; Flora, golden yellow; L'Ami Conderchet, primrose; La Petite Marie, white; La Vierge, white; Madame E. Lefort, orange and amber; Mignon, golden yellow; Miss Davis, pink; Mr. Selby, blush; Piercy's Seedling, orange yellow; White St. Crouts, Frederick Pele, crimson red tipped gold; Jacintha, pinkish lilac; Mr. Cullingford, white; Strathmeath, rose pink, and M. A. Herlaut, claret red tipped yellow.

I have given a somewhat extensive list of varieties in order to, if possible, induce numbers of cultivators to obtain at least some of them,

because so many continue to grow old, dull coloured sorts, which are now quite out of date. With the new varieties we have at command collections of Chrysanthemums in the open air ought to be brilliant and varied in colour, instead of a repetition of dull shades, with which we have been too long familiar. If plants are ordered now it will insure their delivery in good condition next spring. The second year after planting Chrysanthemums are usually better than during the first season, and if they are lifted and divided every three years they are kept vigorous. During recent years I have induced many gardeners to pay special attention to these lovely "Mums," and all have been delighted with them.—ONWARD.

Notes from Ireland.

MUSHROOMS.—The season for this edible fungus has been an abnormal one; in fact several years have elapsed since we have had such a crop. Our local markets were kept constantly fed, but the keen demand kept the markets from being overstocked, and likewise retained a fairly high price, for the ruling prices at the opening ranged from 6d. to 1s. per lb., perhaps a shade higher was reached, whilst at the present time 8d. per lb. can be freely secured for "buttons."

TORENIAS.—My favourable impression of these little flowering stove plants has been retained. I recently noted an extensive array of bushy plants with an abundance of their Gloxinia shaped flowers. *Torenia speciosa* The Bride is an improved form of Fournieri, which is a native of Cochin China. The flowers are larger, the upper petals white, the lower ones a shade of pale pink, and it has the advantage of size. Perhaps the bold, blue colour of other better known varieties gives them an impression of substance, and they more easily attract attention, so that for massing or for edging in a conservatory The Bride would not be so effective.

A GOOD TREE CARNATION.—To gardeners whose taste lies in cultivating Tree Carnations for winter flowering, I would recommend a variety that has been known to me for the past twelve months or longer—namely, Princess Alexis de Monaco. The calyx does not split, and, therefore, ensuring a compact bloom. In colour the centre petals are light rosy pink, while outwards the hue gradually becomes fainter. The flower is compact, and the plants are floriferous; the stems, too, are long, strong, and tough.—A. O'N.

Bulbs as Edging.

BULBS growing in isolated patches or in masses in borders produce a remarkably good display when in flower, but in a prominently placed border there is a gap in summer when the bulbs have died down and are at rest. If the border is judiciously planted, however, with herbaceous plants, which will to some extent spread over the vacant places, this apparent bareness need not be a great eyesore. In such borders, where the ground must be fairly well occupied in summer, the masses of bulbs ought not to be planted so large, so as to give room for the insertion of plants which will meet, or nearly so, in summer. Bulbs may, however, be grown as narrow edgings to borders, and also beds, where, if properly placed, they may remain permanently. The small flowering bulbs are the best for this purpose, such including Winter Aconites, *Scilla sibirica*, *Chionodoxas*, *Crocuses*, and *Snowdrops*. These are all the better if they can be planted permanently. This may be effected by planting close to the edge of the bed or border, and when digging it is an easy matter to leave the space containing the bulbs untouched. The only objection to this plan is the rather untidy appearance the foliage has after the flowering is over, and some are tempted to cut it off, but this is ruinous to future flowering, and must be avoided. The foliage must be retained for the benefit of the bulbs. It will die down in time, and may then be cleared away, the border or bed then resuming its ordinary appearance, and may be kept trim and neat for the season. The earliest of the bulbs mentioned to bloom are the Winter Aconites, with bright yellow Buttercup-like blossoms, which open in January. The roots should be planted now, or as early as possible, placing them close together to produce a good effect.

Following closely upon these will be the *Snowdrops*. Both the double and single are pretty, and may be planted in mixture, but the singles are usually most in favour. *Snowdrops* improve by remaining permanently in the ground. *Crocuses* will follow next. For gorgeous effect nothing beats these; they look best planted in lines of separate colours, blue, striped, white, and yellow. As an edging to a bed use one colour to each bed. A rich, subdued, and brilliant display is made by *Scillas* when they come into bloom, the colour of the flowers being bright blue; they are produced in March, and last a considerable time in good condition. Very similar in growth and flowering is *Chionodoxa Luciliae*; the blossoms are star-like, blue petals, with a white eye. Plant these thickly, as well as all other small bulbs, otherwise the effect is not striking.—E. D. S.

NOTES

NOTICES

Weather in London—Saturday resulted in heavy showers, and Sunday was uncertain, although no rain actually fell. The beginning of the present week was close, with an atmosphere inclined to be foggy.

National Chrysanthemum Society.—The first meeting of the Floral Committee of the above society will be held at the Royal Aquarium on Monday next, September 23rd, at three o'clock. The committee will also meet on the following dates:—October 21st, October 28th, November 11th, and November 18th, at 3 P.M., and on October 8th and December 3rd at 1 P.M. These meetings will be held at the Royal Aquarium.

Carnation Lists.—The Carnation lists issued by the various specialists are now in the hands of all who are likely to add to their stock of hardy or indoor varieties, and amongst others we have received is that of Messrs. Laing & Mather, the Scottish nurserymen at Kelso-on-Tweed. This Carnation catalogue is one of the most complete that is published, and this season the firm are offering a few of the grandest novelties they have ever possessed. To know about these and other varieties of merit the complete list should be obtained.

Begonias in the Open Air.—From what can be seen in the High Street nursery of Mr. H. J. Jones at Lewisham, S.E., and at other places in the suburbs of London, it is evident that few plants are better adapted for summer bedding purposes in the metropolis than are tuberous Begonias. The Ryecroft grower has half an acre of these brilliant little plants out of doors, and these, at the present time, present a living blaze in colours—crimson, scarlet, orange, and gold, not omitting the paler yellows. Cannas back them up and lend relief to a floral display which attracts and pleases thousands who pass the grounds every day.

A Great Prizewinner.—Among the many zealous amateur horticulturists that Kettle and District (N.B.) Horticultural Society possesses, Mr. Andrew Inglis, Rumdewan, is entitled to the premier position. At the annual show at Kettle this year there were forty-seven prizes awarded to Mr. Inglis, thirty-two of them being firsts and fifteen seconds. He also won the Dobbie & Co. medal for the most points. At Freuchie Horticultural Society's Show he was assigned thirty-five prizes, twenty of which were firsts and fifteen seconds, and won a silver cup presented to the society by the natives of Freuchie in Glasgow for the most points. At the Pitlessie Horticultural Show Mr. Inglis was again to the front, winning thirty-eight prizes, twenty-three being firsts and fifteen seconds.

Cardiff Gardeners' Association.—The following splendid syllabus has been prepared by the gardeners of Cardiff and district for 1901-2:—1901: Oct. 1st, "Afforestation in Wales," by Mr. Thomas Lewis, manager to Messrs. Clibran & Son, Manchester. Oct. 15th, "Practical Bee-keeping," by Mr. William J. Sayce, bee expert, Newport, Mon. Oct. 29th, through the kindness of Mr. John Ballinger, chief librarian, the members will visit the Central Free Library to view the valuable works (ancient and modern) on horticulture. Nov. 12th, The "Culture of Calanthes," by Mr. Sharrett, representative of the Newport Gardeners' M.I. Association. Nov. 26th, The "Culture of Calceolarias (Herbaceous) and Cinerarias," by Mr. H. R. Farmer, general foreman, Cardiff Castle Gardens. Dec. 10th, "Notable British Homes," illustrated with lime-light views, by Mr. Councillor J. M. Gerhold, "The King." 1902: Jan. 7th, "Chemical Manures, as applied to Fruits and Vegetables," results of experiments up-to-date, by Mr. F. W. E. Shrivell, F.L.S., Thompson's Farm, Tonbridge, Kent. Jan. 21st, "Orchids," by Mr. Lee, representative of the Bristol Gardeners' M.I. Association. Feb. 4th, "Notes on Aquatic Plants and Old-fashioned Sweet-scented Flowers," by Mr. A. Brown, general foreman, Roath Park. Feb. 18th, "Some Useful Plants for Winter Flowering," by Mr. J. J. Graham, gardener, "Breynton," Penarth. March 4th, "General Outline and Management of Electrical Storage Batteries (such as are installed at private residences)," by Mr. Donald Sutherland, electrical engineer, Cardiff. March 18th, Business—election of officers, &c., commencing at 7.30 P.M. sharp. Mr. John Julian, 15, Bertram Street, Roath, is hon. secretary.

Heavy Potatoes.—A Mr. James Batten has just dug in his garden on the extreme verge of Black Down, Dartmoor, some remarkably fine Potatoes, two of which, attached to one stalk, weigh together 3 lbs. 4½ ozs

Special Fruit Number.—We do not propose to issue a "special number" every alternate week; but this being the season when fruit trees are yielding their harvest, and also as gardeners are about to make their selection of trees and bushes for planting, we purpose to devote our issue for Thursday, October 10th, specially to fruit subjects, both in articles and illustrations. We would welcome short interesting notes on fruit from our readers. Additional notice may be given next week.

An Old Vine at Lincoln's Inn, London.—The old Grape Vine which adorns the front of No. 12, New Square, Lincoln's Inn, has not been very prolific this year, as only about twenty bunches of Grapes have been grown. Two years ago the crop was very plentiful, and the fruit matured beautifully. The ancient Fig tree which grows by the side of the Vine always produces an abundance of flowers each year, but shortly after the Figs are formed they invariably fall off and never reach maturity.

Appointments.—Mr. Robert Winstanley, as head gardener to Sir P. Pryse, Bart., at Gogerddan Hall, Bowstreet, R.S.O., Cardiganshire. Mr. Winstanley was, previous to this recent appointment of his, head gardener for three and a half years to T. Holford, Esq., Castle Hill, Dorchester. Mr. Veary, late gardener at Gogerddan, has entered into business, after thirty years' service to Sir P. Pryse, Bart. Mr. J. Francis, for the last seven years in The Gardens, Parkfield, Hallow, Worcester, has been appointed head gardener to H. J. Allcroft, Esq., Stokesay Court, Craven Arms, Salop.

Bedding at Earl's Court.—The bulk of the flower bedding in the ornamental grounds at Earl's Court, London (wherein are yearly held large exhibitions), is executed by the Messrs. Laing of Forest Hill, S.E. During the months of August and September the effect is nearest its perfection. At all times smartness is apparent, and considerable taste and skill is yearly evidenced by our friends the Laings in their choice of plants with coloured foliage or beauty of form and brilliancy in flowering. Their designs, following, as they do, somewhat of the geometrical, are ably planned. Without this pleasant feature at Earl's Court it is safe to state the grounds would be unbearably dull, instead of which they are at times truly Elysian, and are at all times attractive.

To Study French Forests.—Several pupils at the Royal Indian Engineering College paid a visit some time ago to the beautiful forests near Valenciennes and the Forest of Retz, near Villers-Cotterets, where they were received by the French Forestry officers with the greatest cordiality. For twenty years, up to 1887, the students for the Indian forestry service were trained at the Ecole Nationale Forestière, at Nancy, in France, but since 1887 they have been trained at Cooper's Hill. As the English woods, however, are inconsiderable in area and not ideals of management, the first year's men since 1891 have spent a fortnight every year in the French forests by permission of the Government. This year's party was under the superintendence of Professor W. R. Fisher, the pupils including a Siamese, who has been sent by King Edward to learn forestry at Cooper's Hill.

Town and Country Trees.—People have been complaining, and the complaint is an old one, of the want of imagination in those people who are responsible for the boulevards, gardens, and open spaces of London. It is said that there is scarcely an Ash tree in London, the fine specimen in Gray's Inn Gardens being the one exception. But if an inventory of London trees were taken it would be found that it is rich as compared with the country beyond all comparison. If you travel through some of the Midland counties you will find nothing but Elms, Lombardy Poplars, Oaks, and Ash trees, with just a few Chestnuts, Limes and Walnuts, and some ill-grown Maples and Thorns. If you visit one of the London parks, of which Battersea Park is by far the best specimen, you will spend a long time before you come to the end of your list. There are almost all varieties of the Poplar, including perhaps the most beautiful of them, the Abele. Besides a full tale of the commoner trees, there are Sycamores, Planes, Hollies, Catalpas, which grow especially well in London, and here and there a Paulownia. Considering this variety, it might seem strange, and a legitimate subject of complaint, that the streets are almost exclusively adorned with Planes. The explanation is, of course, and it is a sufficient one, that the Plane is the one tree which not only endures London smoke, but thrives in and enjoys it.

Trade Catalogue.—The new Rose catalogue sent out by Messrs. Wm. Paul & Son is perhaps the largest and most complete they have hitherto produced. Besides a number of illustrations of new Roses there appears a full page coloured plate of Tea-scented "Boadicea."

Gros Maroc Grapes.—A handsome and tasteful bunch of Grape Gros Maroc reached us a week ago from Mr. D. Bowen, The Gardens, Plas Dinam, Montgomeryshire. Gros Maroc seems to be exceptionally fine this year all over the country.

Riot on the Worcester Hop Exchange.—A violent scene occurred on the Worcester hop market on Thursday, a week ago, as a result of a circular issued by Messrs. Edward Webb & Sons of Wordsley, advising their customers to delay purchases until the crop is all gathered in, and prices have found their proper level. A crowd of angry growers besieged the firm's office, tore down their sign, and scattered their samples to the winds. The police had to be called in to protect the heads of the firm, Mr. Edward Webb and Mr. William Webb, M.P. for West Staffordshire, who were blockaded in their office. The firm have issued similar circulars to their customers for ten years past, and their purpose is simply one of philanthropy, and a desire to assist their clientage, motives we all agree with.

Rothsay Gardeners.—On the 12th inst. a social meeting of Messrs. Dobbie's employes was held to mark the occasion of the departure of two of the firm's employes—Messrs. Robert Marshall and P. Miller—who are going abroad, the first-named to Maritzburg, Natal, and the latter to Boston, U.S.A. Councillor Burnie presided. Mr. Smith, as representing the counting-house, and Mr. Simpson, on behalf of the seed department, presented the guests of the evening with handsome Gladstone bags from the employes. Mr. Wm. Cuthbertson also presented them with gold-mounted Swan fountain pens from the firm, and the addresses given referred to the esteem in which they were held by employers and colleagues.

"Reichenbachia": Orchids illustrated and described, by F. Sander, St. Albans, assisted by eminent scientific authorities." Such is the title page of a valuable work, says "The Public Library Journal," just purchased for the Cardiff Reference Library (D 3-1138). The book is in four large volumes, magnificently illustrated with coloured plates, and by reason of its price (£45) is quite out of reach of all except rich people. It is a book which has long been wanted in Cardiff, for Orchid growing by amateurs is increasing, and quite brilliant results are obtained by amateurs of very moderate means with greenhouses and other appliances of quite an inexpensive type. Such a pursuit deserves every encouragement, and the purchase of this valuable book for the Free Library is another example of the readiness of the committee to serve the highest interests of the ratepayers.

Wood Paving in London.—Some of the London daily papers, and notably the "Daily Express," has drawn attention to the use of red gum wood blocks as paving on the streets at Westminster and Whitehall. The Westminster Ratepayers' Committee took the matter into consideration. They have just issued a copy of the report made by Mr. Herbert Stone, F.L.S., an expert of high standing, who is engaged in investigating the commercial woods of the empire, with the concurrence of the Colonial Office, and who is also the examining expert in woods for the Imperial Institute. Mr. Stone made exhaustive comparisons of stretches of wood paving at spots where red gum has been laid alongside Jarrah wood, white oak, and deal, and in nearly every case the results of his investigation have not been favourable to the red gum. "The blocks of red gum now being laid in Whitehall," says the expert, "were carefully examined, and whatever durability the best selected blocks may possess, those now being used are quite unfit for street paving or any other purpose. Although the number of refits is extremely large, I am of opinion that 90 per cent. of those laid at the time of my visit should not have been passed—firstly, on account of the large quantity of sapwood (unripe wood); secondly, because of the wet and unseasoned condition of many of the blocks." Further on in his report Mr. Stone says:—"The manufacture of the blocks has been carelessly done, as they are irregular in size. Apart from those already rejected from this cause, those now laid vary as much as an inch in length and a quarter of an inch in breadth." The circular of the ratepayers' committee goes on to indicate the members of the council who were chiefly responsible for the making of the contract, and it is scarcely possible to imagine that the matter can blow over without an exhaustive inquiry being officially made.

The Annual Dinner of the United Horticultural Benefit and Provident Society has been arranged for Wednesday, October 9th 1901, at the Holborn Restaurant, London, under the presidency of Mr. Peter E. Kay, V.M.H.

Our Farm Page.—Those of our readers who have the management of a "Home Farm" will be interested in the most reasonably argued theme entitled "The Two Sides," chosen as the subject of review on page 302 this week. We would respectfully ask other readers to consider our correspondent's dispassionate letter.

Kew Bulletin.—As a reference issue to the staffs in botanical departments at home, and in India and the Colonies, the Bulletin (appendix iv., 1901) issued from the Royal Gardens, Kew, at the present time will be welcomed by writers, botanists, and many others by whom such information is at times required. The names and addresses of all occupying chief places on botanical staffs at home and abroad are here furnished.

Dried Fruit Prospects.—The Christmas prospects for dried fruit are said to be rather good, although the changing weather makes it unsafe to depend on crops. Currants and raisins coming in during the past week have all been very fine. They come mostly from Greece this year, and are fetching about 18s. a cwt. In Mincing Lane one firm has imported 1300 tons of dried fruit during the week. The crop from which these supplies come amounts to over 200,000 tons. Currants, perhaps, are less plentiful than usual. Last year the failure of the Greek Currant crop had a marked effect on the raisins from Malaga. Bari, the chief Almond market of Europe, will have a good crop. Experts put the figures at 20,000 tons. The whole Almond crop of Europe should reach figures of 40,000 to 50,000 tons, fetching from 85s. per cwt.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighbourhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

Lawes' Chemical Company.—The report of the directors of Lawes' Chemical Manure Company, Limited, for the year ended 30th June, according to the "North British Agriculturist," was presented at the meeting held on 6th inst., and states that the sale of the company's manufactured manures has been fully maintained, but, in consequence of the increase in cost of production, caused by the advance in price of raw materials, which increase it was not possible to obtain from customers, the results have not been so favourable as usual. There has also been a considerable falling off in the demand for imported guanos. The result of the year's trading shows that, after adding the amount brought forward and deducting interest on debentures, there is an available balance of £15,892. The directors propose to pay a dividend of 4 per cent. on the ordinary shares, with interest at 5 per cent. for prepayment on fully paid-up shares, free of income tax, and to carry forward a balance of £1096.

Apples in America.—The work of originating new varieties of Apples goes on. "It is interesting to note that during the past years the list of Apples worthy of cultivation first increased and then decreased," remarks Professor Lazenby. "In 1891 it comprised 339 varieties. In 1899 it had decreased to 300. Quite a number of varieties have been struck off, and of course some new ones have been added. There is another thing that is of some interest, that is the varieties that originated in foreign countries have increased proportionally. In 1891, out of the 339 varieties that were recommended, twenty-two originated in foreign countries. In other words, all but twenty-two originated in this country. Now, in 1899, of the 300 that are recommended, forty-nine of them were of foreign origin. Of these, twenty-two are from Russia, seven from France, seven from England, three from Germany, one from Holland, two are simply marked as Europe, the country not being known, and six from Canada, making forty-eight."

Gadding and Gathering.

"HERE AWA', THERE AWA'."

Hyde Park.

HYDE PARK has been particularly handsome and fortunate in its bedding arrangements this year. The combinations have a considerable amount of novelty about them, and, so far as their development is concerned, they could not have been more luxuriant. It entails conscientious assiduity on the part of Mr. W. Browne and his staff to maintain the appearance of the beds clean, trim, and altogether in their best condition. Go when you like, and you will observe a number of men diligently cutting, sweeping, staking, or watering, respectively, and all to insure success, and a continuation of it. The bedding in London public parks is, of course, one of the great outdoor attractions of the First City; by all means then, let us spare neither the men nor the money, that our superintendents may still be able to gratify a numerous, critical, and varied public.

The variegated Maize always presents a graceful outline, as well as being beautiful in colour. In an oval bed in Hyde Park this plant has been effectively used above Ivy-leaved Pelargonium Abel Carrière, the bed being edged with white Lobelia. The rich colouring of Abutilon Thompsoni interspersed with Heliotropiums, bushy in growth, and standing 4 feet high, having purple Cockscombs and Begonia semperflorens beneath, with a white edge of Lobelia, was also successful and pleasing to visitors.

A simple bed, yet one that was immensely pretty, was oval in form, and contained orange-scarlet tuberous Begonias, and above this ground-covering were symmetrical specimen Acacia lophantha's, in height about 2 feet. The reddish-tinted Alternanthera major was employed as an edging. Those who know that most elegant and showy of bedding plants—namely, Lantana delicatissima, will readily appreciate the beautiful harmony that it, along with a selection of Salpiglossis, would furnish. The Lantanas were well balanced, bushy plants, each 5 to 6 feet high, and laden with their gay, rose-mauve trusses. Blue Lobelia around the margin completed one of the simplest and most effective of the beds. The value of simplicity, combined with good taste, is nowhere more strikingly demonstrated than in the arrangement of forms and colours in flower bedding.

The silvery foliage of Artemisia arborescens (Southernwood) swayed above, and amongst the lavender-coloured flower trusses of Ivy-leaved Pelargonium La France, beneath which there were pale yellow Violas, and around the oval bed a broad marginal band of Alternanthera major. The whole production was highly pleasing to one's sense of sight. The light and slenderly growing Cuphea platycentra above yellow French Marigolds (Tagetes) edged with red Alternanthera amœna, was certainly most creditable and well worth imitating elsewhere. Aster diffusus horizontalis in a summer flower bed is novel, yet it can be employed with all assurance of being a suitable subject. With the ordinary dark, crimson crested Cockscombs, and the allied, but finely contrasting Celosia pyramidalis (red), a happy combination, and splendid effect results. In Hyde Park there is such a bed, having the addition of a blue Viola named Mrs. C. F. Gordon. The sight is one of the most gratifying of any. Iresine Lindeni, together with Fuchsia Mrs. Rundell, whose drooping flowers are pink, showed advantageously above Viola W. Niel, which is lavender coloured.

The foregoing is descriptive of smaller sized beds. In large beds one found such combinations as that showy scarlet-crimson Fuchsia named Madame Cornellison along with Lantana Boule de Blanche, scented-leaved Pelargonium radula, and Ivy-leaved Pelargonium Charles Turner, the whole being thrown into relief by the surface-covering of Mesembryanthemum variegatum. Yet another assortment of distinction included Eucalyptus globulus, Ivy-leaved Pelargonium Madame Crousse, Chrysanthemum Gentillesse, Plumbago capensis, tuberous Begonias, and China Asters, the whole edged with blue Lobelia. A rich "colour-bed" was that in which Ivy-leaved Pelargoniums H. Cannell (rose-crimson in colour, and magnificent in form) and Galilea (a rose-pink variety) were used; and above these were shapely specimens of Eucalyptus Gunni, the bed being broadly edged with Mesembryanthemum variegatum.

But I must summarise the remaining notes relative to Hyde Park bedding. Artemisia arborescens, with Heliotropium President Garfield, yellow pyramidal Celosias, and yellow Violas, combined handsomely. The golden Lantana Drap d'Or, interspersed with Veronica incana, edged with Alternanthera amœna, was beyond criticism; and a fine effect was produced by a bed of Lobelia Queen Victoria, having a blue mass of the Wm. Niel Viola and dwarf Lobelia beneath it, the whole edged with pink Thrift. Before concluding there is one other bed to be noted. It was a little one, round in form, densely filled, and most beautiful, too. The creamy-white variegated Abutilon Swartzii was contrasted against Rosa indica sanguinea, the crimson China bedding Rose, and throughout the bed there was an interwoven mass of the mossy yellow Spargula pilifera aurea, Alternanthera major, and Panicum variegatum. No part of the bed was more than 1½ foot above the level of the smooth green grass. This was the first time I had seen Roses used in Hyde Park bedding, and certainly the innovation (if innovation it is) is a step in the proper direction. Of course there are numbers of large and massively filled beds in Hyde Park, but these have been repeatedly noticed in former

years. A great deal of forethought has evidently been bestowed before such splendid combinations were brought together. A word of recognition is also due to Mr. Linford, the foreman gardener.

Melrose, "the Land o' Scott."

Thousands flock to this "ancient and honorable" little Border town, drawn hither by the writings of that great man of the past century, Sir Walter Scott, Bart., truly entitled the "Wizard of the North." Around Melrose is my boyhood's land, and I know the district well. Our old drill instructor at school, who had roamed the world and been in many battles, used to tell us as lads that "he had seen perhaps as pretty a place as Melrose in his travels, but certainly never any place that was prettier." We believed him, and were pleased. "Tweed's silver stream," and "Eildon's triple heights" are, *primâ facie*, the natural features which lend the greatest attraction to the Melrose district; but along with these there are the Gattonside hills on the opposite side of the broad valley, from Melrose, the Galashiels hills away up in the west, besides numerous beautiful broad and fertile interspersed estates with lovely woods, and clustering villages or isolated residences.

Abbotsford lies a few miles south-west from Melrose, famous for its historical Abbey, and between the two the visitor discovers the neat little village of Darnick, possessed of an ancient tower, also renowned in the pages of history. The district is mainly agricultural.

At Darnick I was pleased to make the acquaintance of a Mr. Lindsay, who has taken to Tomato-growing for the Edinburgh market. By rigorous selection of his fruits he has managed to establish a very respectable connection with some of the best agents and salesmen in the Scottish capital. Each evening he sends off many pounds, or, indeed, stones, of these "Love Apples," carefully graded and packed in baskets with cross handles. These each contain about a stone of fruit. Mr. Lindsay has copied the pattern of London market-growers' glass houses; at least, the sort of house one finds at Mr. Peter Kay's, Mr. James Sweet's or Messrs. Rochford's. These are, as a rule, very lengthy, wide, and roomy span-roofed houses, capable of being used as vineries, Peach houses, or, as in my friend's case, for the culture of Tomatoes. The plants are not in pots; they are planted out in rows a yard apart. He feeds them liberally, in fact too much so. A few have become infested with "sleeping disease" and "black rot fungus." The only course to take is to grub out and at once burn such plants. As a preventive in another season, it would be advisable to spray with a solution of potassium sulphide at the rate of 1 oz. to each 6 gallons of water. The spraying should be done frequently.

Mr. Lindsay only assumed the vocation of a market grower a couple of seasons ago, he having previously been in the employ of Messrs. Wm. Thomson & Sons, Ltd., the famous Grape growers, &c., of Clovenfords. He started in quite a small way, but by dint of persistent hard work and the utmost integrity, combined with an indomitable ambition to succeed, he and his widowed mother have had a very gratifying reward. He hopes to "force" Strawberries and Potatoes during the spring of 1902, and, furthermore, he will include Peach culture in his other responsibilities. My best wishes and hopes are with him and for him, and trust that both his maternal parent and himself may find the sun of prosperity shining all along their paths.

Shrubs at Melrose.

It greatly pleased me to observe many of the newer villa gardens around the town filled with shrubs that have hitherto been quite rare in the district. Prunus Pissardi, Negundo aceroides variegata, Collina arborescens, and many species with brightly tinted and coloured foliage, are quite plentiful. What is equally pleasing is the fact that the superiority and great merit of the more recent Rambler Roses and Teas is recognised. There are few districts in Scotland where trees, shrubs, fruits of all kinds, and hardy flowers, grow with greater luxuriance or beauty than they do at and around Melrose.

It is curious to find so many of the aristocratical demesnes to let in a region so full of romance and natural splendour. Sir Walter Scott's old estate is tenanted by a London gentleman; Lowood is likewise let, and Pavilion has had a few masters during the last six or seven years. Ravenswood, the home of the late Admiral Fairfax, has passed from the hands of his widow, to those of someone else. Allerley, the home, for so many years, of that distinguished Scottish gentleman, Sir David Brewster, who suggested the founding of the British Association, whose sitting this year has just taken place at Glasgow, stands on the Gattonside flank of the valley, beautifully sheltered by trees, yet having a delightful perspective. The Tweed salmon fishing by rod, attracts a number of wealthy gentlemen who pay for the exclusive right to fish many miles of the river. There is only a limited amount of shooting on the neighbouring estates owing to so much of the land being highly farmed. The nursery business so long conducted by Messrs. Ormiston and Renwick of Melrose has also changed hands within the last year. Yes, changes are incessant; they are unavoidable in the progress of the world, and are governed by the advance of one generation over the heels of the preceding. "The everlasting hills," however, look down upon us just in the same old way, and the streams that run on for ever can always cheer us with the song which they have sung to passers-by during long, long years—times before we were born, and will still sing long after we are dead.—WANDERING WILLIE.



The Duration of Cut Flowers.

An ever-increasing demand for cut flowers for decorative purposes makes this an important consideration for those interested. I bring a number from my garden to the office almost every day, and watch the length of time they keep fresh, and find at this season none can come near *Gladiolus gandavensis* hybrids. *G. Lemoinei*, *G. Colvillei*, and *G. brenchleyensis* are considerably behind and less effective. The various Asters and Stocks, if the foliage is picked off and water renewed, will hold nearly a week fresh. Scented Roses before full expansion, are delightful.—W. J. MURPHY, *Clonmel*.

Seedling Briers.

Your correspondent, "R. W.," cannot expect to get picked seedling Briers at the rate of 1s. 6d. per hundred. I get some hundreds each year selected at a price ranging from 4s. to 6s. 6d. per 100. These are fit to bud next season after planting, and I only find a very odd one which has not got the long clean stem of from 3 to 8 inches. I do not agree with "W. R. Raillem" as to Brier cuttings being the best all-round stock. I find it suits H T.'s on my very heavy soil, but Teas do fully 50 per cent. better on the seedling Brier, and are longer lived. The surface-rooting properties of the cutting may be better for the exhibitor, as this stock answers quickly to feeding and stimulants. I would therefore advise "R. W." to write to some of our leading trade growers who advertise in your columns, asking price of good seedling Briers. Most of these growers import Briers from France by the 100,000, and will supply their customers at a reasonable rate.—C. K. D.

Wasps and Hornets.

A question is asked on page 266 as to wasps and hornets occupying the same nests. I suppose if I said I had taken and broken up thousands of nests of wasps, and hundreds of nests of hornets, I should be within the mark, but I never found them jointly occupied. There is no doubt in my mind how the mistake comes in, as at this season of the year hundreds of young queen wasps may be found ready to leave their brothers and sisters—the workers or neuters—in the same nests, which are mistaken for hornets. Or it may be that it is the reverse, that the working hornets which, in some cases, are smaller than queen wasps, are confused with queen hornets and called wasps. It is a very common mistake that people confuse queen wasps for hornets, and I have in many cases corrected them, especially in springtime. Of course I may be wrong, not having seen these specimens. Last week I took out five wasps' nests for two neighbours, farmers, and I may safely say I destroyed a thousand young queen wasps, and also the old ones, which are quite distinct to an experienced eye. All were *Vespa vulgaris* nests, and consequently smaller wasps than the largest species, *Vespa germanica*. I have had specimens, I believe, of every species of wasps' nests, and, of course, many specimen nests of hornets. Hornets' nests are more numerous this season by about six to one than I ever remember, over fifty years since I began to take notice of them.

My experience is that instead of hornets and wasps dwelling together, hornets kill wasps for food, and carry them to their nests, and on one occasion I distinctly saw a hornet flying round my Jargonelle Pears until it caught a wasp, drop to the ground with it, trim off the legs and wings, and soar off across four fields, and by that circumstance I followed the line of flight and found the hornet's nest. Hornets also hunt over Clover fields for bumble-bees, which they carry to their nests, no doubt to feed the young hornets. A hornet's nest is in the Worcester Museum which I exhibited at the first show and conference last year, with a large collection of wasps' nests and other curiosities; the nest mentioned I saw bumble-bees being carried in from a Clover field near.

There is scarcely a day passes that someone does not tell me of something fresh about hornets and wasps, and where nests are, if I like to take them or destroy them for the benefit of others. Hornets and wasps often build nests in queer places. This season I have both seen and heard of hornets' nests in a church tower, suspended by the work of the hornets, one suspended in a barn roof, another in a church, another in a bee-hive, several in the roofs of cottages, about twenty in old trees, and some in the ground as wasps build. Some years ago I took one from a rabbit-hole at least 2 yards from the entrance, which took hours to excavate through a thick bank and through the roots of Oak trees.

Robbing hornets' nests is exciting work, as one never knows exactly whether they will kill one or not, especially in broad daylight, and even on the darkest and wettest nights they frequently fly and settle on me in taking out nests. It is an old saying that one will

kill a man and three a horse. A few days ago a small farmer here lost his only cow by a sting on the udder from either a wasp or hornet. The poor beast went almost frantic, the milk ceased, and in a few days died from blood poisoning, in spite of the efforts of a noted veterinary surgeon. The cow was an excellent milker, and had been in the habit of producing 12 lbs. of butter per week. I fear I have occupied too much space in my reply, but my excuse, if it needs one, is that it is a subject in which I take much interest, having lectured in many towns and villages in Warwickshire on the subject in connection with horticulture under the County Council, giving advice in nest-taking, and explaining methods from practice over a lifetime.—JAMES HIAM, *Astwood Bank, Worcestershire*.

[We sincerely thank Mr. Hiam for his excellent and most interesting information. We may easily have been mistaken in taking the queen wasps for hornets.]

Twelve Roses, any variety.

This class is very generally neglected at our shows, and sometimes omitted from the schedule altogether. Often, when included, insignificant prizes are offered. On the other hand, there seems to be a growing tendency to offer prizes for twelve blooms of certain specified varieties named beforehand in the schedule—e.g., twelve blooms of Duke of Edinburgh, twelve blooms of La France, &c., these classes being for the most part open and the prizes not high.

Now, firstly, when the schedule is formed it is quite uncertain whether the season will be a favourable one for this or that variety, so that the e classes frequently produce no competition worthy of mention. I need hardly point out to exhibitors how different years are sure to be favourable to particular varieties and unfavourable to others. Secondly, I venture to think that few amateurs can make sure a week beforehand of staging twelve blooms of any specified variety, and the practice of entering for classes in which it is doubtful whether you will compete is certainly to be avoided.

On the other hand, most amateurs of any considerable pretensions could stage a creditable twelve of some variety when it comes to the point, and it not unfrequently happens that A or B may grow some less-known or weak-growing variety especially well. It is not very often that we see Chas. Lefebvre shown at his best, yet at one of the shows this year I could have staged twenty-four blooms of that variety which would have surprised its depreciators. The reform that I would advocate is to abolish these classes for twelve blooms of Duke of Edinburgh, twelve blooms of La France, &c., and substitute two classes: 1, Twenty-four blooms (any varieties), nurserymen; 2, twelve blooms (any variety), amateurs. The prizes must be good, and there should be not less than four in each class. Exhibitors should be encouraged to stage more than one twenty-four or twelve if able to do so, and I would advise that they should be allowed to take as many prizes in the class as they can, of course for different varieties. I believe that these classes would be largely supported and greatly add to the attractions of our shows.—T. H.

Sea Lavender for Bees.

Some years ago you allowed me to inquire what your apiarian correspondents thought of Sea Lavender (*Statice Limonium*) as bee pasturage. It blossoms about the same time as Heather. No one seemed to know anything about it, so I now send you a sample of honey made chiefly, if not entirely, from this flower, and shall be glad to have your opinion upon it. I have not found it so much approved of as Clover honey, the slightly bitter taste offending some palates. But tastes differ, and the Sea Lavender is at all events a great resource for late swarms or stocks which have done badly in the early summer, when sufficiently in reach and when the weather is propitious.

I live myself about two miles from the coast, and have been singularly unfortunate with the hives I have taken down to the sea, in the hope that they would strengthen themselves against the winter from this source and save me in sugar. Three stocks "skedaddled," not liking their new quarters, one I had to take home and feed, and the most promising of all, which really did gather honey, has this year been robbed and starved to death. I have, however, a friend living very near the salt marshes whose bees, "being to the manner born," get a good deal of honey from the Lavender, quite enough to compensate them for their diminished area of pasturage, and to set them up, when, as sometimes happens, the latter part of the summer is more favourable than the earlier.

Putting aside the inferiority of the flavour of the honey, Sea Lavender can never, I take it, compete with Heather as bee forage, if only for the simple reason that it supposes tides, which throw the poor bees quite out of their reckoning, and the capricious and often boisterous winds which prevail on the sea-coast. Yet I cannot but hope that these few lines will be some encouragement to intending bee-keepers who live within easy distance of a salt marsh. Many of these have been reclaimed, and now grow something more valuable than Sea Lavender. But wherever this beautiful though scentless flower still adorns the flat and monotonous waste with its delicate coloring, let the merry hum of the bee add another element of cheerfulness.—E. H. R.

Scented Flowers and Leaves.

STOVE PLANTS.—In most places where choice flowers are used in quantity, either as room plants or in a cut state, those giving off sweet odours are in especial demand; and when we remember that perfume from flowers is the revivifying ozone or health-giving air, we cease to wonder that sweet-scented flowers and leaves are so lavishly used. The great ladies of a century ago distilled flowers for perfumes, and ebullitions from Rosemary, Lavender, Elder flower, and made pot-pourri from Roses, herbs, and spices to give a redolent atmosphere to their rooms. At the present day this is frequently made, and placed

autumn, with frequent syringings. A little shade is advantageous during the flowering period, and care must be taken not to wet the flowers, or they will turn yellow. When flower buds are forming, side shoots frequently appear at the base of the flower buds; these, if not removed, will take away the strength from the flower and cause it to decay.

Watering must be well attended to, and at no time do they need a drying treatment; liquid manure and artificials are good, used judiciously, when the pots are full of roots. Mealy bug is often troublesome on Gardenias; the persistent use of paraffin or petroleum is an effectual remedy, and used with caution will do no injury to the plants. They may be syringed in the house, or taken outside when



GROUPING OF BOCCONIA CORDATA. (See page 298.)

in porcelain or enamelled earthenware jars about the rooms and galleries.

I shall not go into elaborate cultural details, but shall touch only on the salient points of their treatment. To commence with those requiring a stove temperature or tropical heat, Gardenias may be selected as general favourites. Their culture is not beset with much difficulty. Allow them a temperature of 60° in winter. Young plants produce the finest flowers, and plants more than three years of age are better thrown away. A batch of cuttings should be struck annually. A good time to do this is about the end of July, when the growth made after flowering is sufficiently consolidated; pieces with three or four shoots and 6 inches in length inserted in small pots strike readily in a propagating case, and when rooted can be potted into 5 or 6-inch pots, in which they will flower the following May or June. A high moist temperature is required throughout the spring, summer, and

the weather is mild, using a wineglassful of paraffin to 2 gallons of water. This to be kept in solution by one person syringing into the vessel whilst another syringes the plants with a good syringe, so as to effectually reach every part of the plant. Petroleum emulsion made as follows I have found excellent for the destruction of mealy bug and scale, either by dipping or syringing, and if made as here given will not injure the thinnest leaved plants. Take 1 lb. of softsoap to 2 gallons of water; place in an iron pan over the fire, allow it to boil, remove it from the fire, and add a wineglassful of paraffin to every 3 gallons of water. A pound of softsoap is sufficient for 20 gallons; the paraffin must be mixed in the 2 gallons of water before adding the remainder.

It is equally as effectual and safe if made as follows, for 20 gallons:—Take 1 lb. of softsoap, add a little warm water so as to dissolve the soap, and no more; then put in the paraffin, allowing a wineglassful

for every 3 gallons, and thoroughly mix; then pour over 3 or 4 gallons of boiling water, and stir briskly. The remainder required may be added cold. Whenever paraffin is used as an insecticide, care must be taken that the sun does not shine upon the plants whilst wet, or much injury will accrue. I have found Gardenias do well in fibry loam and flaky leaf mould that has rotted naturally in hollow places in woodlands.

Tabernaemontana coronaria fl.-pl. is a free-flowering plant to grow along with the Gardenias. The same treatment suits it admirably, but it is more fleeting as a cut flower, and as a room plant very disappointing. The same precaution to remove growths from the base of the flower clusters during the flowering period as mentioned for the Gardenia is necessary.

Toxicophlæa Thunbergi is a rarely seen sweet-scented flowering plant. An ordinary stove temperature and a rather pot-bound condition will cause it to flower freely. A plant I recently saw in a Palm house in April had shoots 2 to 2½ feet in length wreathed from end to end with whorls of pure white miniature star-shaped flowers. If any pruning is done to this plant let it be immediately after flowering, as it flowers upon the matured growths of the previous year.—F. STREET.

Royal Horticultural Society.

Drill Hall, September 24th.

WE have to chronicle an exhibition of the "Royal," which, for fulness and for quality, has not been equalled for months. As our report, which follows, is a very full one, we can economise in our prologue. There were a score of new Fellows proposed.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair), with Messrs. James O'Brien, H. Little, J. Wilson-Potter, W. H. Young, W. Bilney, J. W. Odell, E. Hill, Jas. Douglas, W. Cobb, H. Ballantine, de B. Crawshaw, H. M. Pollett, H. A. Tracy, H. J. Chapman, and W. H. White.

A superb collection of *Dendrobium Phalæopsis Schöderianum* was arranged by Mr. A. Chapman, gardener to Captain Holford, Westonbirt, Tetbury, Gloucestershire. The grandly grown plants were carrying long spikes of large, richly coloured flowers. Mr. Chapman also sent a few *Cypripediums*, *Lælia præstans*, and *Dendrobium formosum giganteum*. The excellence of the arrangement added much to the beauty of the exhibit. Messrs. H. Low & Co., Bush Hill Park, Enfield, staged a miscellaneous collection of Orchids, comprising *Cattleyas*, *Odontoglossums*, *Cypripediums*, *Oncidium*s, and others. Small exhibits of Orchids were contributed by several growers. Mr. W. H. White, Orchid grower to Sir Trevor Lawrence, Dorking, had an interesting group of Orchids.

Floral Committee.

Present: W. Marshall, Esq. (in the chair), with Messrs. Chas. T. Drury, H. B. May, Chas. E. Pearson, H. Selfe Leonard, J. F. McLeod, Wm. Howe, G. Reuthe, Jas. Hudson, Chas. Dixon, Chas. Jefferies, Herbert J. Cntbush, J. W. Barr, W. P. Thomson, Geo. Gordon, Harry Turner, Owen Thomas, E. H. Jenkins, Geo. Paul, and H. J. Jones.

Dahlias.

On this occasion one marked the high-tide flow of Dahlias, and of these the Cactus varieties were by far the most extensively shown. Show Dahlias were not very numerous, pompons were in fair evidence, and single Dahlias were represented by a few sterling varieties from Mr. M. V. Seale and Mr. J. Walker.

Messrs. Thomas S. Ware, Ltd., Hale Farm Nurseries, Feltham, London, staged one of the largest collections, and here were such conspicuous novelties as Earl of Pembroke, coloured a rich maroon, and of velvety texture; Wallace is a variety not very large in size, but most telling in colour—i.e., a bright, rich yellow shaded with russety amber; Viscountess Sherbrooke, an orange red; Emperor, rosy purple; and Brema, bright lilac pink shaded with palest creamy pink, were amongst the most outstanding.

Mr. James Stredwiok, Silverhill Park, St. Leonards-on-Sea, neatly staged Cactus varieties in bunches, amongst which were Goldfinch, W. F. Balding, Aunt Chloe, purplish black; and Lilac, a pale pinky rosy variety of much beauty of form, with twisted petals whose tips are silvery white.

"Hobbies," Ltd. (Mr. John Green), in their usual excellence, arranged a group which was a masterpiece in tasteful and skilful harmony of form and colour. By the side of their elaborate collection they set up a small boxful of a new strain of Dahlias which, while we do not care for them so far, may yet develop to popularity. The new "break" is termed "Anemone-flowered," and the best of these varieties present the true Anemone characteristics. When these come to greater perfection we may be able to recommend a few of them to our readers. Of the Cactus Dahlias here included, mention may be made of the beautiful crimson-scarlet Flamingo, with broadly fluted and bifurcate petals; Miss Grace Cook, which resembles Lovely; Queen of Hearts, bright carmine-scarlet, very narrow "thready" petals; Vesta, a charming rose-pink subject; and the new Sailor Prince, an outstanding

novelty of merit, glowing in the intensity and depth of its claret crimson hue; Ajax, an ochre-buff, or russet coloured sort, seems so named because of its enormous size. The whole group was finished off with great care. Another fine group came from Messrs. J. Cheal and Sons, Crawley, in which the most pleasing varieties were Rosine, Lord Brassey, Emperor, Major Weston, and Lyric. As a change from the Cactus types we turn to Mr. J. Walker's "hedge" of single Dahlias, set up with great excellence, free and graceful. The group of singles included Peacock, Polley, Duchess of Westminster, Victoria, Anora, The Bride, Miss Henshaw, Loyalty, Polly Eccles, Donna Casilda, and Eclipse. Others were shown, and these were equally handsome and meritorious. All of the foregoing represent the élite of the single varieties of Dahlias. Mr. Walker also staged a numerous range of Show and Fancy blooms, also Cactus sorts.

Mr. Wm. Treseder, florist, Cardiff, displayed bouquets of Cactus Dahlias, and specimen flowers of these and the Show varieties in boxes. His blooms of Elsie were exceedingly fine, Firebrand was also beautiful, and so were Exquisite, Lucius, Mrs. J. J. Crowe, and The Clown.

Mr. J. T. West, Tower Hill, Brentwood, helped to swell the general blaze with a large collection, including Lucius, H. E. Wood, crimson; Emperor, Spotless Queen, J. W. Wilkinson, Captain Dreyfus, and others. His blooms of the Gaiety, Geo. Rawlings, Mrs. W. Saunders, Buffalo Bill, Shotesham Hero, Duke of Fife, Dorothy, Ethel Britton, and other Shows and Fancies, were excellent samples.

From Mr. S. Mortimer of Farnham there also came an attractive display of cut Dahlias. Mr. Seale's singles included Urban, Youens, Kohinoor, Ted Seale, Percy Brickwell, and other novelties.

Messrs. Keynes, Williams & Co., The Nurseries, Salisbury, had a minor group of select new Cactus varieties, which embraced Clarence Webb, a gorgeous incurving fluted variety, bright rose red of a peculiar and distinct shade, suffused with buff; Arab, after the character of Matchless, but more refined and brighter; Columbia, after Mrs. H. J. Jones type; Mrs. Dunstan, Gabriel, Ringdove, General Buller, and others. Many of these obtained certificates.

Roses.

Roses were displayed on two tables, and here Messrs. Wm. Paul and Son, Waltham Cross, Herts, furnished a most delightful exhibition. In the centre were the "Riviera Roses," about which the following facts were printed:—These are "seedlings raised at Waltham Cross from the ever-blooming varieties so largely cultivated on the French and Italian Riviera. This is a new class of Rose remarkable for the beautiful tints of colour and for their freedom and constancy of blooming, especially in August, September, and October." This sums up the facts concerning these lovely Roses. The best varieties on view included, amongst others, Salmonæa (award of merit on September 10th, 1901); Perle des Jardins, Tea Enchantress, Tea Sulphurea, Queen Mab China; that most charming new Tea named Corallina, so free and persistent indeed. Others were Morning Glow, Dainty, Elizabeth Kitto, Empress Alexandra of Russia, François Dubreuil, W. A. Richardson, Marie Van Hontte, Souvenir de Catherine Guillot, and Marquis de Salisbury. The collection was certainly a most magnificent one for the time and the season.

Messrs. Paul & Son, The Old Nurseries, Cheshunt, filled many feet of tabling with Teas, H.T.'s, and Chinas. Papa Gontier and Isabella Sprunt contrasted finely; Camoens (H.T.) was showy; Mrs. W. J. Grant, Madame Abel Chatenay, Queen Mab, Killarney, François Dubreuil, Billiard et Barre, White Maman Cochet, Paul's Cheshunt Scarlet, and Eugénie Lamesch were all of them forward, in fresh and good condition.

Mrs. Campion (gardener, Mr. J. Fett), Trumpets Hill, Reigate, staged a nice and fresh tableful of our Roses.

Hardy Plants.

Here Mr. Amos Perry, from Winchmore Hill, staged some remarkably fine flowers, including that most brilliant border plant *Tritoma MacOweni*, a dwarf but very showy species; *Rudbeckia purpurea*, *Trollius europæus*; the double *Arabis alpina*, a very useful plant; and many of the Asters.

Messrs. Barr & Son, King Street, Covent Garden, W.C., staged the rare *Colobium autumnale plenum*, and also the double white one. Both of these are large and full, exceedingly showy, and somewhat odorous. These autumn Crocuses ought to be as liberally planted as are the spring species, and at Kew they have already led the way by planting these *Colobiums* in the grass. *Zauschneria mexicana* was also shown, and a very large selection of Phloxes. Of these there were Champellon, Burgundy, Cœur de Leon, Schliemann, Flambeau, Jocelyn, Darwin, and Coccinea. The group was set up with care. Another good *Colobium* noted just as we left the group was C. Cigana Dagb, a novelty of great size, whitish in the inner surface, with long, tapering segments, tinted lilac mauve, and is as large as *Tulipa elegans*. The Port-wine berry (*Phytolacca virginiana*) was shown and created a considerable amount of interest.

Miscellaneous.

Leopold de Rothschild, Esq. (gardener, Mr. James Hudson), staged a very remarkable group of red and yellow-flowered *Celosia pyramidalis* grown in pots. They were very large and feathery, and displayed a considerable variation, some being "plume"-like at the base, and spreading out into a concentrated Cocksoomb at the top. He also staged *Quercus dentata*. Messrs. H. Cannell & Sons, Swanley, set up

on this occasion one of their unapproachable groups of Cannas. A selection of the newer varieties includes Oscar Dannecker, German Crown Prince, Mrs. F. Dreer, Duchess of York, Paysagiste Marriot, Paul Bruant, and Elizabeth Hosse, the latter being a variety that has been hard run upon. Cuba is also one of the most recently introduced of these superior forms.

A group of highly coloured Crotons (*Codiaeums*) was staged by A. Pears, Esq. (gardener, Mr. W. Farr), of Spring Grove, Isleworth.

Messrs. J. Peed & Son staged a large collection of flowers of tuberous Begonias from the open-air, such as they have been showing at exhibitions for some time past. A nice group of coloured Ivies, trained in various forms, and of different sizes, in pots for a manner of decorative purposes, came from Mr. John Russell, Richmond Nurseries, Richmond. We hope to give more attention to Mr. Russell's stock than at present, till then we desist. Then another change was derived from the inspection of Messrs. W. Cutbush & Son's group of ornamental foliage plants. At the back of the group were graceful specimens of *Eulalia japonica gracillima*; there were also noble plants of the broad-leaved *Arundo Donax variegata*, *Miscanthus zebrinus*, and elsewhere we noted the charming *Sambucus racemosa plumosa foliis aureis*. Carnations were staged in front, together with *Eriola Alporti*, *Physalis Francheti*, *Dracenas*, and fruited Orange plants. A group of *Celosias* was sent by Miss Adamson, Regent's Park.

Chrysanthemums in pots were forward, though not in any amount, from both Mr. W. J. Godfrey and Messrs. Wells & Co., Ltd. Some of these were certificated, and will be found described in another part of our report. *Lilium Browni*, *L. Henryi*, and *L. sulphureum*, in baskets and flourishing with blooms, were staged from Messrs. J. Veitch & Sons, Ltd., Chelsea. Messrs. Burrell & Co., Cambridge, set up a large collection of Gladioli, and Messrs. Wallace & Co. had hardy plants.

Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair), with Messrs. George Woodward, W. Farr, Alex. Dean, Geo. Kelf, H. Markham, J. Willard, J. Jaques, Geo. Miles, James Smith, G. Norman, A. H. Pearson, W. Poupert, W. Wilks, Jos. Cheal, M. Gleeson, and S. Mortimer.

One of the most interesting exhibits in the show was the collection of Plums from Messrs. T. Rivers & Son, Sawbridgeworth. The group comprised a number of trees in pots, these being in the best of health and grandly fruited. The varieties represented were Monarch, Primate, Golden Transparent, Jefferson, Coe's Golden Drop, and Pond's Seedling. In addition to the pot trees, Messrs. Rivers contributed Autumn Compôte, Grand Duke, Wyedale, President, Late Transparent, Reine Claude de Bavay, and those named above in baskets; the specimens were all far above the general average of quality. The Horticultural College, Swanley, contributed a collection of fruits, including Apples, Pears, Plums, and Cherries. The most conspicuous Apples were The Queen, Worcester Pearmain, Lord Derby, Lane's Prince Albert, Peasgood's Nonesuch, Stirling Castle, New Hawthornden, and Pomme de Nègre. Amongst the Pears were Marie Louise, Louise Bonne de Jersey, Doyenné du Comice, Doyenné Boussoch, and Pitmaston Duchess. Messrs. H. Cannell & Sons, Swanley, sent Cabbage Cannell's Defiance in splendid form. Mr. T. Walder, gardener to Col. Warde, Barham Court, Maidstone, sent twenty-five fruits of Melon Hero of Lockinge; they were of beautiful colour, admirably netted, and of ideal size.

Mr. W. Farr, gardener to A. F. Pears, Esq., Spring Grove House, Isleworth, staged a table of fruit, the last that this excellent grower is likely to send from those gardens, the charge of which he is now relinquishing after a period of eight years. The Grapes were Madresfield Court, Muscat of Alexandria, Gros Colman, Appley Towers; Apples St. Edmund's Pippin, King of Pippins, Blenheim Pippin, Sandringham, Ribston Pippin, Fearn's Pippin, Worcester Pearmain, Lord Suffield, Gloria Mundi, and Peasgood's Nonesuch; Pears Emile d'Heyst, Marguerite Marillat, Fondante d'Automne, Marie Louise, Catillao, Beurré Hardy, and Beurré Clairgeau. There were also Peaches, Nectarines, Melons, and Plums.

A collection of vegetables, covering over 30 feet of tabling, was sent up by Miss Adamson (gardener, Mr. Geo. Kelf), of South Villa, Regents Park, two miles from Charing Cross. The vegetables were clean, even, large, yet refined, and very numerous in variety, receiving a silver Banksian medal. Messrs. Cannell also staged their handsome Cabbage Improved Defiance, which we recommend as one of the very best.

Medals.

Silver-gilt Flora medals to Messrs. Wm. Paul & Son; "Hobbies," Ltd. Silver-gilt Banksians to Messrs. Burrell & Co., Messrs. Cannell and Sons, and Mr. J. Walker. Silver Floras to Mr. Amos Perry, Leopold de Rothschild, Esq. Silver Banksian to Messrs. T. S. Ware, Ltd., Miss Adamson, Messrs. J. Peed & Sons, Messrs. Barr & Sons, Messrs. W. Cutbush & Sons, Messrs. Paul & Son, and Mr. S. Mortimer. Votes of thanks were accorded to Messrs. Wells & Co., A. Pears, Esq., and Messrs. Wallace & Co. The Fruit Committee recommended a silver-gilt Knightian to A. Pears, Esq.; silver Knightians to Messrs. T. Rivers & Son and the Horticultural College, Swanley; also silver Banksian to Miss Adamson for her vegetables, and to Col. Warde for his Melons, with a vote of thanks to Lord Poltimore.

Certificates and Awards of Merit.

Certain subjects, including two Gladioli, could not be discovered by our representative, and are necessarily omitted.

Carnation Mrs. S. J. Brooks (W. Cutbush & Son).—A grand pure white; the flowers are of fine form and deliciously fragrant (award of merit).

Chrysanthemum Horace Martin (J. J. Martin).—A fine sport from *Crimson Marie Masse*; the colour is pure yellow (award of merit).

Chrysanthemum Godfrey's Pet (W. J. Godfrey).—A decorative variety of great promise; the colour is very rich yellow (award of merit).

Cattleya Luddemanniana Stanleyi (Stanley, Ashton & Co.).—A lovely variety; the sepals and petals are pure white and the fringed lip is marked with crimson purple; the side lobes are golden yellow (first-class certificate).

Cattleya Iris (Charlesworth & Co.).—This is from a cross between *C. bicolor* and *C. aurea*. The sepals and petals are green suffused brown at the margin; the lip is maroon with faint white spots (award of merit).

Cattleya fulvescens (Charlesworth & Co.).—This is from a cross between *C. Forbesi* and *C. aurea*. The sepals and petals are rose buff. The edge of the lip is rose and the throat golden (award of merit).

Dædalacanthus Watti (Col. Beddowe).—A handsome greenhouse plant, growing about 2 feet high; the colour is rich blue purple (award of merit).

Dahlia Clara G. Stredwick (J. Stredwick).—A splendid Cactus Dahlia; the colour is warm buff (award of merit).

Dahlia Robin Adair (M. V. Seale).—A very distinct single; the centre is rose scarlet, and the edge white (award of merit).

Dahlia Beauty of Sevenoaks (M. V. Seale).—A lovely single; the basal colour is yellow, with rich crimson markings and cream tips (award of merit).

Dahlia Maid of Athens (M. V. Seale).—A single variety; the colour is yellow with white tips (award of merit).

Dahlia Royal Sovereign (M. V. Seale).—A single variety; the centre is crimson with a dull white margin (award of merit).

Dahlia Aunt Chloe (J. Stredwick).—A Cactus variety of a very dark yet rich crimson black shade (award of merit).

Dahlia Goldfinch (J. Stredwick).—A perfect Cactus Dahlia; the colour is yellow buff (award of merit).

Dahlia Mildred (C. Turner).—A Pompon; the colour is bright brick red (award of merit).

Dahlia Hesperia (C. Turner).—A fine Pompon; the colour is bright yellow, and the edges of the petals bright red (award of merit).

Dahlia Nana (C. Turner).—A miniature Cactus variety, with crimson scarlet flowers (award of merit).

Dahlia Mrs. H. A. Needs (W. Baxter).—A true Cactus flower; the petals are of fine form, and the colour is rich crimson-maroon, with a suffusion of purple; it is very distinct (award of merit).

Lælio-Cattleya Galatea (Charlesworth & Co.).—A bigeneric hybrid from *Lælia Dayana* and *Cattleya Schobfieldiana*. It is very extraordinary in colour, which is silver red in the sepals and petals and intense black crimson in the lip (award of merit).

Quercus dentata (J. Hudson).—An exceptionally handsome Oak; the very large leaves are soft green with crimson towards the extremities (award of merit).

Pennisetum Ruppelianum (H. Cannell & Sons).—A graceful Grass with light green leaves and a brownish inflorescence (award of merit).

My Two Days Excursion.

Two delightful days were spent by me in the sunny breadth of Hampshire, in its Shawford district. I had come by rail from Eastleigh, and adjourned to the village inn, where I had a slight "refresher" after my long journey. On making inquiries from the genial old landlord as to the distance to Cornstiles, the residence of F. W. Flight, Esq., he answered promptly, "Well, governor, I should think about two miles;" thereupon I set off, and after walking over a lovely bridge spanning a beautiful river, noted for its trout fishing, I came to the handsome entrance gates, through which there threaded a lovely carriage drive, well surrounded with the finest specimen Conifers, too many to mention. I soon found Mr. W. Neville, the head gardener, as I entered the kitchen garden. The beautiful herbaceous borders were a special feature, and here, too, were all the newest Cactus Dahlias. The end of one of the walks was banked up by masses of Veitch's dwarf *Antirrhinum*, in all the rarest and brightest colours, and were indeed a grand sight.

In the department devoted to fruit, Peaches and Plums on walls were bearing good crops. Pyramid and standard Apples were fair; the "Suffields" bore heavily. Coming to the range of lean-to houses one found Grapes well done; Madresfield Court was especially fine.

Melons are grown in boxes, and such varieties as Duchess of York and Hero of Lockinge were carrying a capital yield. In the fernery plants are grown for house decoration, and all were in a most healthy condition.

In the cool houses were to be seen a fine collection of Zonal Pelargoniums, Fuchsias, and the new Veitch's hybrid Streptocarpus. These made a fine show. Coming now to the Chrysanthemums, of which about 500 plants are grown, these range about 4½ feet to 7 feet in height, and carry excellent foliage from the bottom upwards. Skilful culture has left its mark with no uncertainty, and it is safe to predict that Mr. Neville will be well represented at the leading exhibitions if his plants go on as they promised recently. I noticed many of the new Japanese varieties, including Baden Powell, a strong grower; Dora Hercheimer, General Buller, George Towers, Henry Stowe, Hawarden Castle, Lady Audrey Buller, Lord Salisbury, very dwarf; Mrs. Greenfield, Madame Cordonnier Wibaux, M. Jacob Holtzer, Marquise V. Venoster, Mrs. F. Grey Smith, Miss Lily Mountford, Rev. Douglas, and Snowdrift. Amongst incurved varieties were Bonita, Comtesse d'Etoile, Col. Baden Powell, very strong; Fred Palmer, John Miles, May Bell, Mr. J. Bond, Miss Goodsmark, Mrs. Gerald Williams, Henry Ellis, Frank Hammond, and, lastly, L. Giles.

A walk through the delightful Rose grounds and Carnation beds must not be overlooked, for Mr. Flight makes a speciality of growing these two lovely flowers. All the newest and best sorts are embraced in the collection, and readers of "our Journal" may have frequently noticed the gardener's name in connection with prizes won at southern exhibitions. After two hours' close inspection Mr. Neville's kind and thoughtful employer asked me to partake of some refreshments, and welcomed me into his mansion, thence to the noble dining-room, where I duly enjoyed this gentleman's generous hospitality. Having satisfied the dictates of Nature, the "iron horse" conveyed me quickly to Fareham, a pretty town close to the coast opposite to the Isle of Wight.

Its main street is distinguished as being one of the widest to be discovered in any provincial town. Soon I was on my way to the noted home of Chrysanthemums, so long successfully cultivated at the Trinity Nurseries by Messrs. W. and G. Drover. Mr. W. Drover at once recognised me as an old competitor in many keen contests, and cordially invited me to enjoy an inspection. Here they have about half a thousand "Mums" from 4 feet to 8 feet high, having good foliage down to the pots. Their speciality are the incurved varieties. These are all well budded and properly timed, but the Japanese sorts were not quite so promising. Of course these are grown for trade purposes, and include all the best old and new varieties. After a pleasant chat in Messrs. Drovers' offices with the members of the firm I left and took train to Stokes Bay, thence per steamer across to Ryde, Isle of Wight, arriving there at six in the evening; the music discoursed by the splendid band of the Royal Marines was enjoyed for a time, then on to Ventnor, on the south side of this pretty southern island, and soon I retired to rest.

The next morning I was up with the lark and had a dip in the briny ocean, which indeed was an unaccustomed treat to me and sharpened my appetite for breakfast. I then walked to the top of the cliffs toward St. Lawrence, about three miles off, and viewed the pretty church, which is one of the very smallest in the kingdom. On my return journey I went from Ventnor to Southsea per steamer, and on the principal pier there I had another musical treat in hearing the band of the Royal Marine Artillery. Having duly admired Portsmouth's grand new Town Hall, I crossed the road to Portsmouth Town Station in good time for the train by which my excursion ticket was available. —CHELTENHAM.

Dulwich Park, London.

THIS is another of the London County Council parks, situated in the south-eastern region of the metropolis. It has no claims to notice so far as the feature of its summer bedding goes, for the only attempt in this direction is the furnishing of a few ordinary beds at the entrance gates. But Dulwich Park has been so tastefully and skilfully planted and planned that it lays claims to be one of the prettiest of the public recreation grounds in London. Our illustration of one part of a rockery at Dulwich Park is characteristic here. All over the area (which is almost entirely flat, by the way), these rockeries have been instituted. Thus, at the point where the handsome park roadways diverge in their several directions, a rockery has been adopted by way of demarcation, and also for the sake of providing a centre of interest. These rockeries are variedly raised in the centre, and have been effectively planted with such as purple Berberis, Prunus Pissardi, Golden Privet, Ailanthus, Negundos, Thorns, Acers, and Acacias.

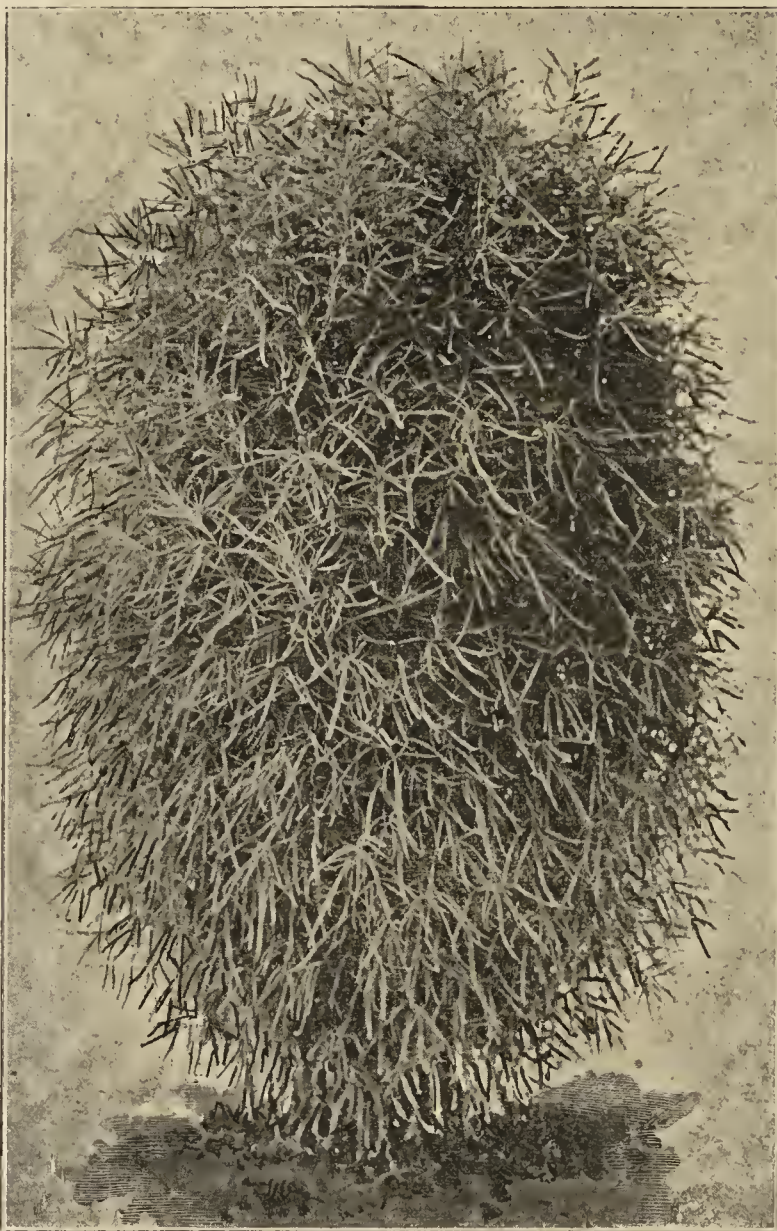
Suitable alpine, herbaceous, perennial, and half-hardy plants are liberally included. Cannas tower tall, and are overtopped in cases by the summer flowering Phloxes, the Dahlias, Tobacco-plants, massive Sunflowers in variety, and Ricinus. Trees of a "weeping" character are fairly plentiful in Dulwich Park. What may be termed "specimen" trees, that is, trees standing alone and of goodly mein, are abundant on the smoothly shaven, green grass belts in parts of the park skirting the outer roadways. These lawns constitute one of the best features of this attractive public property. In most cases they are sheltered with a surrounding belt of shrubbery, which, again, is fancifully margined in ribbon border style with the usual showy bedding plants. Clumps, or minor mounds of Ivy (*Hedera Helix* var.) trained over tree stumps are also to be seen as objects of interest on the forefront of the lawn belts.

Such clumps are pleasing to the eye, as indeed, clumps of Ivy are at all times. There are here and there a few patriarchal Oak trees still standing, solid and grim, "defying the winds of a thousand years," and presenting a rugged contrast to the polished appearance of the grounds and surroundings on all sides. Mr. W. Bailey is superintendent, and seems to manage his charge conscientiously. Included in the park is a large Rose and Rhododendron dell or garden, occupying the somewhat extensive surface of a slightly depressed area at the south (?) end of the grounds. The brilliancy and splendour of so large a congregation of Rhododendrons, when flowering in spring, can be clearly imagined.

There are large recreation "flats" in one or two parts of Dulwich Park, the total extent of the grounds being 72 acres. On all hands it is evident that an enormous amount of labour has been expended before

Dulwich Park assumed the furnished, comfortable, attractive appearance which it presents to the view of visitors in these days. Furthermore, the improvements, at least so far as planting shrubs and plants may be considered, are still being accomplished. Exception has repeatedly been made to the "brick-bat constructions," which pass muster as rock gardens, and which, as I say, are so numerous here. Yet if stones are difficult to acquire in such a district as that of which I write, where's the crime in making use of the next best substitute—in this case, bricks? Soon these can be hidden and modified by proper planting, and in a year or two the stern artificiality and formalism tones down, and what may at first have been an eyesore becomes a true object of artistic pleasure, a feature of interest and of adornment.

A Prolific Pear Tree.—According to the "Birmingham Daily Post," the Rev. Walter Waddell, Borthwick Manse, Gorebridge, has just taken 1100 Jargonelle Pears from a tree on the manse wall, many weighing two to the pound, while the average would be three to the pound. The tree was planted forty-eight years ago, and Mr. Waddell has carefully pruned and trained it for forty-one. It is on a west wall, and has always been prolific, but this is a "record crop."



KOCHIA SCOPARIA. (See page 298).

Early English Gardening.

(Continued from page 214.)

BUT although Britain was first visited by the Romans fifty-five years before the Christian era, and, although it is thus evident how much they were alive to the improvement of this, in common with all other nations over which they had spread their conquering arms, yet it was not until the time of Agricola, A.D. 78, that the devastations and turmoils attendant upon a war of subjugation had ceased so far as to enable them to win the attention of the natives, with success, to the arts of peace. By the strenuous endeavours of that distinguished general the natives were inspired with a love of the Roman language and acquirements, and when the legions were finally withdrawn from the island, A.D. 426, the Britons were left comparatively a polished but enervated people. The art of cultivating the ground was a principal object of improvement, and, during their possession of the island,

influence of the tyranny and convulsions which shook the city, and their native land generally, there were many extra temptations to adopt this as their home. The seeds of improvement having thus strongly germinated, no untoward circumstances were afterwards capable of entirely preventing their further growth; for though continually checked, yet, on a review of ages, the superior civilisation of any one over its immediate predecessor is always apparent.

Immediately after the departure of the Romans—viz., about A.D. 450, the Saxons formed a settlement in our island, and a series of civil wars succeeded, until the inhabitants pretty generally hailed Egbert, about A.D. 726, sole sovereign of the realm. Christianity being introduced in A.D. 507, this period may be reckoned as an epoch in the gardening annals of this country. Independent of the tendency it had to soften the manners of the people and render them more domestic, it gave encouragement to the progress of the useful arts, and of these gardening was one of the most congenial, for it helped innocently to beguile otherwise unoccupied hours, and was the means



A ROCKERY IN DULWICH PARK.

became so extended, that not only were large quantities of corn annually exported from it, but, during the government of Agricola, he was enabled to augment the tribute which had formerly been imposed upon grain.

About A.D. 278, the Roman settlers, finding that some parts of the island were not unfit for vineyards, obtained permission of the Emperor Probus to plant Vines and make wine of their produce, a liberty which had been refused to them by the narrower-minded policy of his predecessor Domitian. Probus, also, to preserve his soldiers from the dangerous temptations of idleness, employed them in covering with vineyards the hills of Gaul and Pannonia; and two large districts are described, the digging and planting of which were by military labour. ("Vopiscus Hist. August.," 240. "Eutropius," ix. 17. "Aurel. Victor in Probi vita." "Victor Junior.")

From the remains of Roman villas, and other records of the state to which they had brought the arts of civilisation in this island, we have every reason to believe, although particular evidence is wanting, that gardening was likewise improved by them, so as to be in every respect similar to its practice in their mother country. The Britons amalgamated with the Roman settlers, who were very numerous. The veterans even, whether they received the reward of their services in land or money, usually settled with their families in the country where they had spent their youth; and in Britain, far removed from the

of affording luxuries to the palate, which were by no means held in contempt by the monks and recluses of those times. These were persons of education when compared with the laity, and had an intercourse with foreign countries, through their brethren, which facilitated the communication of improvement. Even their fasting from animal food was of benefit to horticulture, for it rendered them more desirous of superior vegetables, and condiments arising from their tribes. Thus Italy, Spain, Germany, and France, countries always abounding in the ministers of religion, became distinguished for their culinary vegetables and fruits. It may be added, as another truly valuable advantage to horticulture, secured to it by religious establishments, that, whilst the country at large was devastated by war, their property was usually held sacred, and consequently many varieties of vegetables were preserved which otherwise would soon have become extinct if cultivated only in less hallowed ground. From the example of the ecclesiastics the higher orders of the laity acquired a similarity of taste, and from these again the fondness for the products of the garden and its improvements extended in wider circles.

Gardens and orchards are mentioned, as being in the possession of the inhabitants of monasteries and other religious establishments, in the oldest chartularies. Of orchards many traces still remain. One in Icolmkill, in Iona, one of the Hebrides, is described by Dr. Walker

("Essays," ii., p. 5), as having existed there probably from the sixth century. The Monastery of St. Columba was founded there A.D. 566 ("Gibbon's History of Rome," c. xxvii.). Camden and Leland also mention various other instances in England. The Vine, we have seen, was introduced by the Romans, and was particularly admired and attended to by the carousing population of that age, if for no other of its qualities than the liquid yielded by its fruit. *Guin-wydder*, *Guin-bren*, *Guin-ien*, or *Fion-ras*, its names in the Welsh, Cornish, Armorican, and Irish dialects, i.e. literally the wine tree. Vineyards were flourishing here at the commencement of the eighth century, as is testified by Bede ("Eccles. Hist." b. i., c. 1); and, in the year 962, we find, in a deed giving lands near Southampton, from Edgar, "King of all Britain," to the Monastery of Abingdon, a clause stating that the gift includes "a vineyard situated near Wæcet together with the vine-dressers" (vineam circa Wæcet sitam, cum vinitoribus ("Historia Monasterii de Abingdon," 321).

(To be concluded.)

Societies.

Studley (Warwick) and District Allotment Association.

The winter session for discussing subjects in horticulture was commenced on Thursday last; Mr. H. Ingles presided, and there was a good attendance of members. The opening subject was "Gathering and Storing Fruit," by Mr. James Hiam of Astwood Bank, who has been judging and naming fruits at five shows in the locality lately. Mr. H. gave some useful and practical advice, laying particular stress on the fact that many people spoiled fruits (from what he had met with) in careless gathering, pulling the stalks out, and causing premature decay from the wound set up, and much of the fruit was said to "keep bad," and no wonder. Some of the best samples of Apples, Peasgood's Nonesuch, the best dish of fruits at Redditch Show, he said, were spoiled in this way. Earwigs also, it was pointed out by samples, caused much mischief from small wounds, and such fruits required careful observation and putting aside. A useful and interesting discussion followed Mr. Hiam's address, and a hearty vote of thanks, followed with musical honours, wound up a pleasant meeting. Mr. Hiam consented to give the next address on "Wasps and Hornets."

Shirley (Southampton) Gardeners' Society.

The members of this society who attended the usual monthly meeting on Monday, had a treat in Mr. Edgar Eady's lecture on "Fertilisation of Flowers," a subject to which he has devoted a good deal of time as a scientific hobby. In the absence of the chairman, Mr. B. Ladhams, F.R.H.S. (who has not yet recovered from his accident at Shirley Flower Show), the chair was taken by Mr. J. Jones, vice-chairman, who called on Mr. Eady to enlighten them on some of the mysteries of Nature.

The lecturer in the course of his remarks, which were made very clear by diagrams, showed that the main object of the production of flowers is the perpetuation of the plant by seed. The great variety and beauty of the contrivances of Nature to effect was the subject of their consideration. He also showed the wonderful structures in some plants, as with the Violet to prevent self-fertilisation, and he referred to a number of interesting experiments by Darwin and others. In the course of his remarks Mr. Eady emphasised the need of cross, rather than self-fertilisation for the production of strong, vigorous seeds, which were calculated to sustain the future of the plants, and he pointed out the ingenious contrivances of Nature to secure this result, although, on the other hand, there was provision for cold and unfavourable seasons, when the plant was unlikely to be visited by bees, to secure self-fertilisation. Illustrating, by means of a flower of an Orchid, Mr. Eady showed exactly what took place by the insect trying to get at the nectar, and with a fine-pointed pencil he removed the pollen and showed it to his audience. He also commented upon the marvellous adaptations of some West Indian flowers to secure the processes of Nature, and showed that there was a beautiful harmony in insect forms and habits answering thereto.

There was a good discussion, taken part in by Messrs. Jones, Wilcox, E. Ladhams, &c., the latter mentioning the difficulties he met with in crossing certain plants. Mr. B. Ladhams had a very fine collection of herbaceous cut blooms, some of the best being Gaillardia (Shirley novelties), which have been shown from the open ground at every meeting since last May, showing what a fine plant this is for border work. The far-famed Heliopsis B. Ladhams was included in the collection. This hardy and beautiful flower will last quite fresh, when cut, for a fortnight in water. Nelson Ward, Esq., Blightmont (gardener, Mr. J. Thomsett), exhibited a fine collection of Dahlias, which were very highly commended. Four new members having been enrolled, a vote of thanks to the lecturer, chairman, and exhibitors, closed the meeting.—J. M.

The Kew Botanical Repository.

COMPARATIVELY few realise that at Kew we have the great botanic headquarters of the empire, that within its herbarium, library, and museums the whole of the earth's vegetation, as far as it is known to science and research, is brought under observation, and carefully classified. This aspect of the place as a "central dépôt" and a "clearing house" is brought vividly forward in the bulky Blue-book recently published.

With the technical details of the subject which called the Royal Commission together the general public are not concerned; but most people will agree with the majority report that the herbarium of dried plants now at the British Museum should be transferred and added to that of Kew. Sir William Hooker founded the Kew Herbarium and Museum, the former with his own private collection. His son and successor, Sir Joseph Hooker, happily still with us, added his valuable specimens collected in Antarctic and Indian travels; and it has been further enriched with the collection of John Stuart Mill, with the special collections of Orchids, Mosses, Lichens, and fungi of other individuals.

From Kew go forth a constant succession of men to take up botanic work in India and in every part of the Empire, and the authorities are in communication with correspondents in all parts of the world. A Customs officer in Southern China has sent some 13,000 specimens, many hitherto unknown and unnamed to botanists. The flora of Southern Africa is almost, if not entirely, classified; but some of the most touching parcels received last year were from soldiers at the front, who, after a battle may be, have noticed strange plants, and have sent them to Kew. Scattered on the tables ranged between each row of cabinets will be found heaps of unmounted specimens sent by various persons—a private traveller, a gentleman in charge of an ornithological expedition, a Government official, a missionary or merchant, who in like manner are eager either to know the names or to benefit science. If the specimen has hitherto been unmet with, there comes the arduous task of christening. Of course, the plants of Europe are best known, and the plants of that land which has been least traversed are proportionately unknown. But it may be gauged that Great Britain, with her colonies, owns one-sixth of the world's flora; India is rich in varied plant life, possessing as it does such a range of climates and altitudes.

One melancholy proof of the necessity to our colonies of such a botanical centre as Kew, said Mr. Baker to a "Daily Chronicle" representative, is seen in looking over the once flourishing countries which supported the great nations of antiquity. Persia, Palestine, Asia Minor, Greece, Northern Africa, Cyprus, have all been changed through man's ignorance and improvidence. Fertile corn land has been turned to sandy desert, mountains covered with forest changed to stony ridges, water springs dried up, alluvial soil kept in place by tree roots swept away by rains, perhaps never to return. Under the guidance of Kew this is impossible in modern days, and one of the most remarkable botanical facts is the way in which science has caused the change of and extension in the area of the growth of common economic plants.

At one time the United States had a monopoly in raw cotton. Now India exports yearly many millions of pounds worth. China had the monopoly of tea. Now India supplies us almost exclusively. So with the West Indies; its natural products were becoming exhausted. Kew stepped in, and the colony has received a fresh lease of life in developing new cultures like the Banana and Orange, of immense commercial value.

The Construction of a Verandah.*

VERANDAHs are, I believe, very much more common in America, Australia, and the Cape than they are in England, but with this difference, that there they are for coolness; whereas in England, I think, they should be regarded more as shelters, enabling us to sit out of doors in spring and autumn—sometimes quite into the winter, and often till late at night—rather than during the very height of a hot summer's day. In England, as a rule, we want to lengthen out our summers, both at their beginning and at their ending, rather than to lessen the sultriness of a very seldom occurring over-hot day, on which rare occasions a shady tree is more suitable than a verandah. There seems to me, therefore, to be this essential difference between a verandah in a hot country and in England, the one is for coolness, the other for shelter, I might almost say for warmth. I would never, therefore recommend a verandah on the north side of a house nor on the east. It should always run round the south and west sides—round both, mark you—so that when a cold wind happens to set along one side you may bask in the sun upon the other. For the same reason the east end of the south side and the north end of the west side should always be closed in with glass. How useless a verandah is on the north side of a house I can testify from experience, as my vicarage has one, but I have never once sat under it in twenty years, and only retain it for appearance sake, as

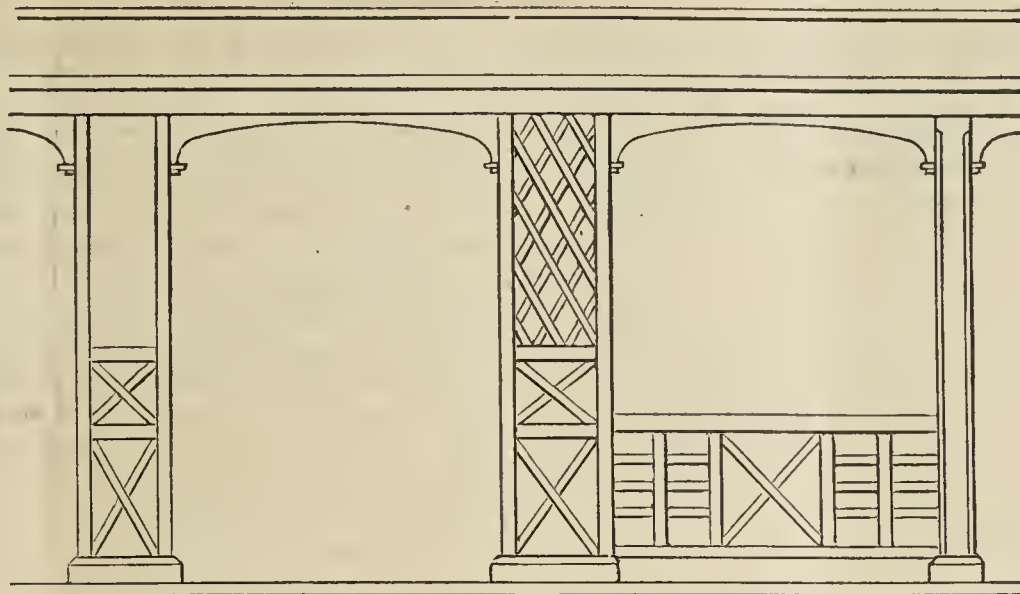
* Contributed by REV. W. WILKS, M.A., Secretary of the Royal Horticultural Society, to the Society's Journal, vol. xxvi., parts 1 and 2.

it masks an ugly wall. Having fixed on the site, the next point is to fix on the material to use in building. And let me very strongly advise wood, not iron. Iron is bitterly cold in winter and very hot in summer. Many a creeper is killed by the extra intensity of the cold in winter on the metal, or by being literally roasted on one of our very few hot days in summer, which can occasionally be exceedingly hot. Iron, too, beautiful as it is in wrought-iron gates and hanging lamps, and even knockers, is not a suitable material for verandahs. The Goddess Flora altogether forbids any attempt at ornamental ironwork in her domains beyond the aforesaid gates and railings, where such things are needed. And oh! eschew an iron roof above all other things, however ornamentally (?) it may be curved and finialled. Its heat is appalling on even a moderately warm day, and its cold in winter equally extreme. It is also almost impossible for the gardener to get about on it to nail up or to clip the creepers, and it is ugliness incarnate.

The next point is that a verandah should be made of a sufficient width to allow of an 18 inch wide border all along the side of the house for flowers and creepers to grow in. But I had better now describe my own, beginning at the ground level. The total width from the house to the outside edge is 8 feet (see vertical section plan), made up of 18 inches of border (A), with a slate edging (B) 1 inch thick, 5 feet 9 inches of tessellated pavement (C) of hard tiles in simple pattern bedded on concrete, and finished off with 8 inches of stone curb (D) outside.

The total height of any particular verandah must be governed by the height of the windows, but as a rough guide, the extreme height should be about 1 foot above the windows of the ground-floor rooms. In my own case the total height is 9 feet 7 inches, the last 7 inches representing the plate E resting on the iron bracket F. These iron brackets, of which the details are shown in another diagram, are let into the wall and set in cement at convenient distances, according to the contour of the house, but at about 6 feet apart, and on them rests the plate E, which forms the back of the whole framework of the roof of the verandah. It will be noticed that this bracket keeps the plate E from coming back flat against the house, and leaves an open air-space of 4 inches wide for creepers to pass through, and for the heated air lying close under the glass to escape by. The brackets are made of flat wrought iron $\frac{3}{8}$ inch thick and $1\frac{1}{2}$ inch wide, and consist of a horizontal main piece about 1 foot long, the last 3 inches being split and turned out opposite ways to give a good hold in the wall. They should project altogether $6\frac{1}{2}$ inches from the flat of the house, so as to leave the 4-inch space clear. An upright piece of the same iron is riveted into the last mentioned at the width of the plate—i.e., at $2\frac{1}{2}$ inches from the front, to which the plate E is bolted top and bottom. The whole of this is further supported by a bracket piece of $\frac{5}{8}$ inch round wrought iron, riveted into the horizontal mainpiece, and firmly screwed into a wood block cemented into the wall. A great deal of the strength of the whole building depends on the construction and firm fixing of these brackets.

The next point to consider is the front supports of the roof. These, as will be seen in the outline diagram of the front woodwork, are mostly in the form of latticework, the main frame of which is made of wood 2 inches wide by $2\frac{1}{2}$ inches deep, rabbited in the centre to $\frac{1}{2}$ inch, in which is fitted the latticework, of $\frac{1}{4}$ inch by 1 inch stuff, as shown in the woodcut; the total width of these uprights is

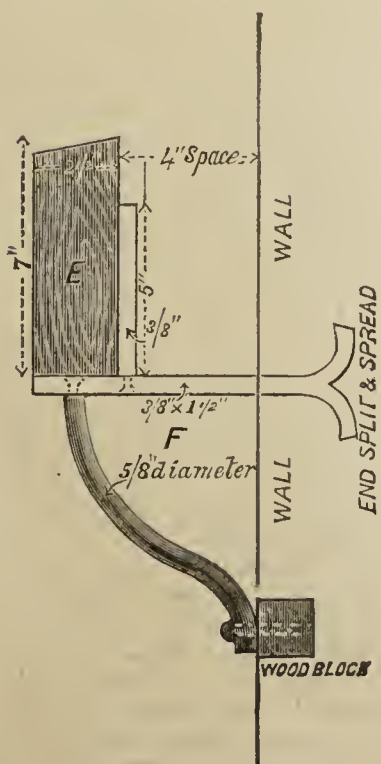


OUTLINE OF FRONT WOODWORK.

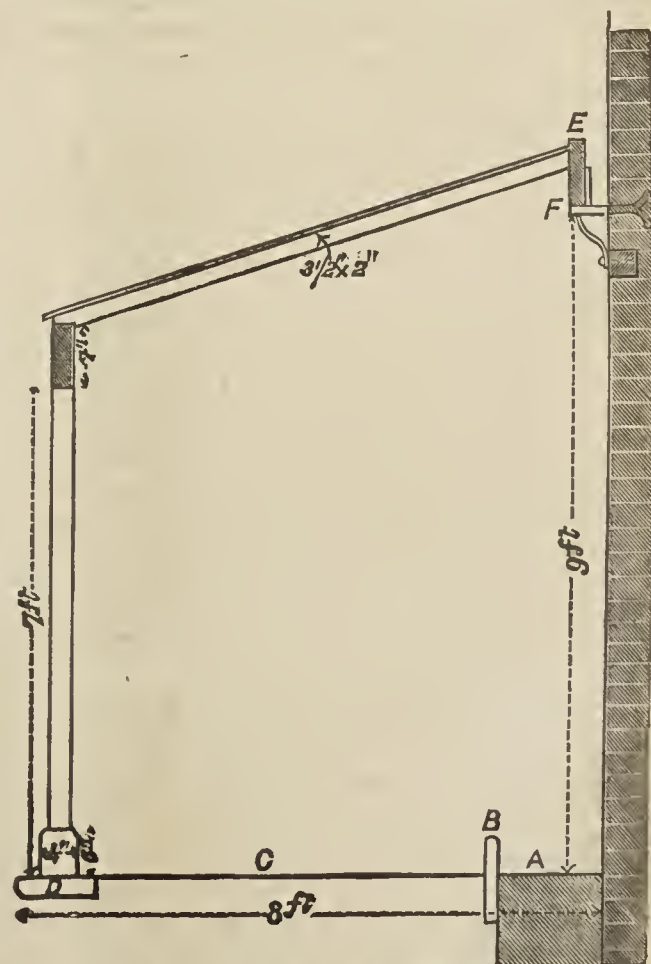
ones, where from the span of the arches the lattice supports would have come too close together. The spacing and span of the arches must always depend on the look-out required from the windows, the centres of the large arches or springs being kept opposite the centres of the principal windows. The roof, as already mentioned, is made of rafters $11\frac{1}{2}$ inches apart, and 2 inches wide by $3\frac{1}{2}$ deep; the heavy appearance of this depth is relieved by the lower part being moulded. The whole is glazed with rolled glass, each sheet being 1 foot wide, and the whole length of the rafters from back to front to avoid drip at joints.

In order to guard against the possibility of rain getting through on to the windows of the house, it might be as well to let a strip of sheet zinc or lead into the wall exactly over the windows to cover the 4 inch air-space, unless the creepers are sufficiently thick, as in my own case, to make this unnecessary. An outside border of about $2\frac{1}{2}$ feet between the lawn and the curb stone of the verandah is a great improvement, except in the case of such arches as are wanted for going in and out, and to keep it from being walked on I have fixed a framework (see figure) between the front supports, which is also very useful to train an outside lot of low creepers to. They also add stiffness and firmness to the whole structure.

One word as to the colour of the paint to be used. No one should be dogmatic, as the colour is entirely a matter of taste, and I have no right to say my taste in such matters (or in any) is better than my neighbour's. I only, therefore, say what I personally like and dislike. I dislike intensely imitation oak—paint should not be ashamed of itself, or try to pose as what it is not. Again, I think one single colour, and only one shade of it, should be used; there should be no attempt to ornament the woodwork by different shades or colours of paint. There are two colours which always seem to me to harmonise well with plants—a warm nut brown and seakale-leaf green. Both are, I think, good for the purpose. Myself, I have used the seakale-green, and many whose opinion is worth having have admired it. The colour when first put on must be a shade darker green than a Seakale leaf, as the colour always fades a little at once.



DETAIL OF BRACKET.



VERTICAL SECTION OF VERANDAH.

15 inches. It will be noticed that the lower 3 feet consists of two divisions with simple diagonal crossbits $1\frac{1}{4}$ inch square. These uprights stand on stone blocks 6 inches high, 4 inches wide, and $16\frac{1}{2}$ inches long, the top edge being bevelled all round. The front plate, resting on the top of these supports, is the same size as the back plate—viz., 7 inches by $2\frac{1}{2}$ inches, into which the rafters are mortised at $11\frac{1}{2}$ inches from edge to edge. In my own case, in order to lighten the appearance, I have introduced one or two plain pillars of wood 4 inches square, instead of always repeating the lattice



Muscari "Heavenly Blue."—We call attention to this wonderful variety, than which nothing in the way of blue excels it in the spring. Secure and plant a few bulbs on any sunny bank by the side of a hedge; in such a position it grows luxuriantly, and appears more in effective keeping with its surroundings than when planted in bare borders.

Lilium Batemanniae.—This is a beautiful Japanese species, which flowers early in August; the plant attains the height of 3½ feet, and is a good grower. The flowers, which are of a deep apricot yellow in colour, are very pleasing to the eye, especially when seen in large masses. The stalks average from five to ten blooms each, and these last remarkably well, either on the plant or in a cut state. Although comparatively cheap, *L. Batemanniae* is not grown so largely as it merits.

Ardisia Oliveri.—During the past few weeks this has been one of the most attractive flowering plants in the Palm house at Kew. It is a small evergreen bush, about 1½ foot high as represented, though given plenty of room it makes quite a large plant. The leaves are ovate, and are conspicuous by reason of their glossy dark green surface. The flowers are borne in large terminal heads, and are rosy-purple in colour. They are followed by dark, almost black fruits, which add a further interest to the plant. It has been in cultivation about twenty-five years, having been introduced from its home in Costa Rica in 1876. Its cultivation is very similar to that of the general run of stove plants, and given rich open soil, a moist atmosphere, and plenty of water whilst growing, it is almost sure to succeed. A figure of it may be seen in the "Botanical Magazine" at t. 6357.—W. D.

Kochia scoparia, Schrad., is a pretty, light green foliaged annual, and was shown growing in a pot at the Royal Horticultural Society's meeting in the Drill Hall on September 10th. It received on that occasion a first-class certificate. By the courtesy of Messrs. H. Cannell and Sons, Swanley, the introducers of the above, we are enabled to furnish a reduced likeness of this graceful and somewhat peculiar plant. Its cultural treatment is as simple as that of a Balsam; one need only sow the seeds, and the plants will grow to perfection without any great amount of attention. April is a suitable month for sowing, and by the end of May the plantlets may be pricked out in open borders. It is at times named Summer Cyprus or Mock Cypress, appellatives that in a measure describe its appearance. The genus *Kochia* derives its name from Prof. W. D. J. Koch, 1771-1849, who held the chair of botany at Erlangen for a considerable period. The flowers are inconspicuous, the genus being included under *Chenopodiaceae*. The plant dies within two weeks of flowering. The height of *K. scoparia* is usually 2½ feet, and its foliage becomes crimson in September, from which character it has, in one case at least, received the erroneous common name of Mexican Fire Plant. It is a remarkable plant.

Heterogeneous Grafting.—Horticultural journals are giving currency to a statement that M. Bonnier showed that plants of entirely different families had recently been grafted with success—for example, the Maple upon the Lilac, the Kidney Bean upon the Castor Oil Bean, and the Cabbage upon the Tomato. This was at the Paris Academy of Sciences. Statements such as these, wholly opposed to the experience of practical men, should not be trundled around, says "Meehans' Monthly," without a word of caution. Years ago, a correspondent of the writer, a gentleman of character and caution, wrote that he had succeeded, in Florida, in grafting the Japanese Persimmon on the Oak. He was asked for specimens, and kindly sent some. Truly, the scions had budded forth to young branchlets—but a close examination showed that there was no actual union. The scions fitted tightly in the cleft made in the Oak plant, and had managed to suck in enough moisture to permit the pushing out of the growth. They sprouted just as they would have done had they been in a vessel of water. They were dead before the season was over. One may not say Professor Bonnier is wrong—but may say that unlikely things should be closely tested before being given out as facts. Readers of the *Journal of Horticulture* may recall the able article on "Impostor's Grafting," that appeared on January 17th last.

Dichorisandras.—It is advisable in treating this genus to retain them in a warm house. A suitable compost consists of rich light loam, sand, and peat. Thorough drainage is absolutely essential, and, while in growth, abundant supplies of water may be allowed. Occasional applications of weak liquid manure are very beneficial to the plants, and greatly improve the size of the flowers and heads. After flowering less water is necessary, but the soil must never be allowed to become excessively dry.

Wild Fruits.—Three of the very finest of our useable wild fruits are the Bramble, the Elder, and the Mountain Ash. All are in great abundance just now. Everybody knows how to utilise the Bramble. The use of the Elder and the Mountain Ash, or Rowan, says "The Sun," is not so familiar. The Elder makes a fine soothing jelly, and also the king of home-made wines. The latter, however, when well made and aged is insidiously intoxicating. The Rowan berry makes a jelly superior in appearance, and much more piquant, than Red Currants, but this fruit is said to destroy the memory.

Aralia spinosa.—*Aralia spinosa* is one of the most beautiful of small trees. Its immense flower heads develop fully about the 15th of August. Besides the flowers, the large spread of the leaves should be observed, each leaf being of a compound nature, developing to a length of from 2 to 3 feet. To see the tree when bare of foliage, it is the last to suggest its giving shade, yet large specimens form an overhead canopy entirely ample to shade those who may be seated under it. It is frequently seen planted among shrubs and trees, but this is not such an appropriate place for it as an open one, when it may stand alone.

Extirpation of Medicinal Plants in America.—The curse of professional root-diggers, who systematically traverse the country, devoting with the avidity of seventeen-year locusts, threatens seriously the annihilation of some of our medicinal plants. For the past few years the demand has been especially for Ginseng, resulting in its almost complete disappearance from former haunts, after two or three seasons of this persistent thievery by travelling diggers. Blood-root has entirely disappeared from this vicinity, within the remembrance of many, and Goldenseal is extremely rare, also Goldthread. All but the first of these plants were probably secured by local hunters.

Bocconia cordata.—In a garden famous for herbaceous flowers, namely, that of Miss Humberston at Newton Hall, near Chester, I recently saw a large patch of this decorative plant growing luxuriantly and to great advantage (see illustration on page 291). This was planted in a border some 20 feet long, at the back of which was an old brick wall, which gave added effect, as seen through the light coloured foliage of the *Bocconia*. Mr. Wakefield, the head gardener, also showed me, with some amount of pride, his excellent collections of other herbaceous flowers, the most noticeable of which were perhaps *Lobelia cardinalis* var. Firefly, *Chrysanthemum maximum*, hybrid *Gaillardias*, perennial *Helianthus* of sorts, and *Veronica subsessilis*, *Scabiosa caucasica* and *alba*, and many others, from which he had culled his numerous prize collections, including those gained at the great Shrewsbury Show.—VISITOR

Ixoras at Kew.—Throughout August and September a very fine lot of *Ixoras* made a most effective display in the Palm house, and came in for a great amount of admiration. The most effective group was made up of a number of fine plants of *I. macrothyrsa*, a species from Sumatra, remarkable for its immense heads of large vermilion-red flowers, the heads being in some instances quite a foot across. Among the other species and varieties, each of which was represented by a number of plants, the following were conspicuous—*I. coccinea*, represented by bushes 3 feet high and 2½ feet through, smothered with red flowers, and its varieties *Fraseri*, *Pilgrimi*, and *Dixiana*, all well flowered. *I. coccinea* var. *lutea* added variety by reason of its yellow flowers, and *I. brachiata* performed a similar service by means of its large heads of white blossoms. *I. spectabilis*, a Burmese species, was very showy, while well flowered specimens of *javanica* were very noticeable by reason of their orange-scarlet blossoms. Of others mention must be made of *Prince of Orange* and *incarnata*, which were both very fine. The high temperature and moist atmosphere of the house appear to have just met the requirements of the plants, whilst being in a very sunny position the wood has had a good chance to become thoroughly ripened. Although at one time very popular plants, *Ixoras* appear of late years to have declined in favour, and are now absentees from many gardens. When, however, they are seen as at Kew this year they must again become fashionable.—W.

Young Gardeners' Domain.

Watering.

SOME inexperienced amateur gardeners would very likely smile scornfully if told that one of the most important, and perhaps one of the most difficult, duties which the grower of plants under glass is called upon to perform is that of watering them. They might admit that raising plants from seed, striking cuttings, potting, and maintaining a suitable temperature were tasks in which the experience of an expert was of value, and likely to effect results which they could not hope to rival; but watering, surely anyone could water a plant—that, at least, presents no difficulty to the most inexperienced, and it may not be an altogether unpleasant reflection for those who depend for a livelihood on growing plants for sale that vast numbers are watered by anyone, so effectually watered that they soon have to be replaced by others, to the pecuniary benefit of the professional grower.

Of the many causes which lead to the death of plants after they leave the grower's care, the most general is undoubtedly improper watering, and more plants are probably killed by an excessive, than by an insufficient water supply. Every gardener knows that one of the great secrets of success in growing plants is judicious watering, and the art is not to be mastered in a day, or a week. If, as is often supposed by the inexperienced, a rule could be laid down that certain plants required water at certain intervals, all would be simple enough; but as it is impossible to lay down any such rule, this is where the necessity for thought and observation on the part of the gardener comes in.

It is easy enough to say a plant must be watered when it requires water, but the point is to be able to judge when it does require water, or is likely to require it. At times it is both possible and necessary to go through a collection or group of plants and tap each pot with the knuckles or a stick, and with a little practice the degree of moisture in the soil can be judged to a nicety by the ring. But this means is not always practicable; life is short and time is precious, and will not always allow of its being done, particularly in watering small stuff. Often, when an inexperienced person might suppose a man to be watering simply haphazard, there are half a dozen considerations passing in his mind deciding whether a certain plant or group of plants is to be watered or not, but so rapidly that to the casual observer he appears to be splashing round in a careless, happy-go-lucky fashion.

The circumstances which must govern the supply of water given to plants grown under artificial conditions are many. The nature of the climate of which it is a native, whether it is in a rapidly growing state or in bloom, whether it is exposed to bright sunlight and ventilation, or in close proximity to the hot-water pipes or away from them, and many other points regulate the amount of water required. Newly potted stuff must be watered carefully for some time until the pot begins to fill with roots, when, as the plant gets more firmly established, more and more water will be required. The season and the state of the atmosphere are other important factors. Many plants which can scarcely be overwatered during the height of the summer will suffer and possibly damp off if not kept on the dry side during cold weather, while it is obvious that a plant in a close, damp atmosphere will transpire less through the foliage, and consequently require less moisture at the root, than one in a house that is kept well ventilated, and where the air is free from humidity.

Only a knowledge of the peculiarities of the various kinds and orders of plants, to be gained by experience, will teach a gardener how to water so as to obtain the best results. From the theoretical side, it is true, much may be said, such as that plants with very fine fibrous roots, like the Ericas, require frequent attention, while those with thick fleshy roots, like Palms, will go without water for some time without harm; that plants with thick hard leaves, such as the Sedums, transpire slowly, while those with soft flabby leaves, such as the Cucumber, having large stomata, transpire quickly, and must never be allowed to get dry. But without practical knowledge the would-be gardener would find this of little use to him. Experience is the only sound teacher, in this case at any rate, and he would find, as in most other horticultural operations, that an ounce of practice, if he make an intelligent use of his faculties of observation and judgment, is worth many pounds of precept.—A. W. D.

Trade Catalogues Received.

James Cocker & Sons, nurserymen, seedsmen, and florists, 130, Union Street, Aberdeen.—*Dutch Flower Roots.*

Samuel Dobie & Son, Heathfield Gardens, near Chester.—*Garden Annual, autumn edition.*

Laing & Mather, Kelso-on-Tweed, N.B.—*Carnations.*

Hugh Low & Co., Bush Hill Park, Enfield, Middlesex.—*Catalogue of Plants, Shrubs, Trees, &c.*

Lonis Paillet, nurseryman, Vallée de Chatenay, Chatenay, Seine, Paris, France.—*Tree and Herbaceous Pæonies.*

William Paul & Son, Waltham Cross, Herts.—*Catalogue of Roses.*

Amos Perry, Winchmore Hill, London, N.—*Bulbs and Tubers, part I.*

Pinehurst Nurseries (Otto Katzenstein, manager), Pinehurst, N.C., U.S.A.—*American Seeds Conifers, Palms, Trees, Shrubs, &c.; also Wholesale Seed List of Woody and Herbaceous Plants.*

Herrn L. Späth, Baumschule, Baumschulenweg, Berlin.—*Trees, Shrubs, and General Nursery Stock.*

Robt. Veitch & Sons, 54, High St., Exeter.—*Bulbs and Strawberry List.*



Fruit Forcing.

Cucumbers.—The latest plants which are to afford a supply of fruit about the new year should be placed out in ridges or hillocks, training with a single stem to the trellis, up which they may be allowed to advance two-thirds, when pinch off the lead. Those not having the convenience of a Cucumber house may secure fair supplies of winter fruit by growing the plants in pots or boxes, training the growths near the glass over the paths in stoves, fruiting Pine houses, or other well-heated structures. Plants in bearing should not be overcropped, or the fruit allowed to remain longer than it is fit to eat, removing all deformed fruit in a young state. Maintain a night temperature, 5° less in the morning, 75° by day, up to 85° or 90° with sun, admitting a little air at the top of the house at every favourable opportunity, and keeping the evaporation troughs charged with liquid manure, floors damped with water about 8 A.M. and 4 P.M., dispensing with the syringe over the plants. Reduce the supply of water at the roots, but not so much as to cause flagging. A little sweetened manure sprinkled on the beds occasionally will benefit the plants through the waterings, washing their elements into the soil and the ammonia given off, but this must not be excessive, or the foliage will be injured. Keep the foliage thin and the glass clean, so as to secure thoroughly solidified growths.

Melons.—The end of the Melon season, as regards those grown in frames and pits heated with fermenting materials, is approaching, though fairly good fruit may be had up to November, especially of kinds that will keep some time. Any fruits approaching ripeness should be cut with a good portion of stem, and placed in a house with a gentle warmth, where they will ripen, and be welcome additions to the dessert. From houses a supply of fruit will be kept up some time longer, the latest fruits only swelling now. Sufficient moisture will be secured to the crop by damping in the morning, and again early in the afternoon, affording water to the roots moderately; a supply once a week will in most cases be sufficient. All superfluous laterals should be cut out, so as to afford the principal foliage the benefit of the autumn sun. Plants with fruit approaching ripeness should be kept rather dry, and a brisk heat maintained with rather free ventilation, the temperature being kept at 65° at night, 70° to 75° by day, rising to 85° or 90° from sun heat, affording a little air at the upper part of the roof whenever the weather is favourable.

Vines.—*Midseason Houses.*—Black Hamburgs and other descriptions of thin-skinned black Grapes have the colour taken out of them by hanging, and can only be lessened by keeping a good spread of foliage, or drawing a double thickness of herring-net over the roof-lights. The latter is the preferable plan, as lateral growths interfere with light to the principal leaves and the free access of air so desirable for maturing the wood. Those from which the Grapes have been cut may have the growths cut back to a few joints above the pruning buds, first curtailing the laterals and then cutting back the main growths. This insures the buds becoming plumper, whilst the freer access of light and air affects the wood favourably. A free circulation of air is necessary to expel damp, with a little constantly to prevent the deposition of moisture on the berries, a gentle warmth in the hot-water pipes being necessary when the external air is cold and damp; but the wood being ripe and the growth matured, it will suffice to maintain a temperature of 50°, and this, with a free circulation of air and a cool day temperature, will secure the Grapes keeping plump and sound. Vines that have not the wood ripe should have a temperature of 60° to 65° at night and 70° to 75° by day, admitting air freely, and continuing this until there is no doubt on the point. Keep the laterals well in check, not allowing them to interfere with the chief growths. The border must not be allowed to become too dry, or the Grapes will shrivel, therefore afford a supply of water where necessary, always in the morning and on a fine day, so that air can be admitted and the superfluous moisture pass off. The watering will not do the least harm, for it is not moisture at the roots, unless excessive, that causes the Grapes to spot and decay, but a continued stagnant atmosphere, moisture being condensed, it may be imperceptibly, on the berries, that give moulds their opportunity, which they never pass by, but grow and multiply under the favouring circumstances. Keep well ventilated, and have no leaks in the roof, then all will be well with the Grapes.

Late Houses.—Where the Vines were started in good time, say March and early April, and aided in the spring by fire heat, as well as in the summer, the Grapes will be thoroughly ripe, in which state they can only be expected to keep satisfactorily, and the wood thoroughly matured; all laterals or spray may be removed down to the main buds, ventilating freely on all favourable occasions. Fire heat will only be necessary to prevent the temperature falling below 50°. Muscat of Alexandria, however, matures better in a temperature of 55°. To prevent dust falling on the berries raking or sweeping must not be

practised. Mats or clean straw laid over borders will to some extent prevent evaporation. Outside borders need not be covered where the soil acts like a sieve, but where composed of somewhat moisture-holding material, a covering against heavy rains is advantageous. Glass lights are best, wooden shutters good, and tarpaulin over dry bracken or straw answers well. Where the Grapes are not yet ripe the temperature must not be less than 70° to 75° by day, and 65° at night, falling 5° through the night, allowing an advance to 80° to 85° from sun heat, continuing this until the Grapes are ripe, at least until the wood is brown and hard, for it is almost useless to expect good results in Grapes that are not properly finished by this time.

Young Vines.—The laterals must now be gradually cut back, letting the sun have a clear effect on the principal growths, not removing them all at once, but by degrees, getting them near the main rod with little further delay, so as to leave nothing but the chief cane or canes, and thus the principal leaves will plump the buds. Those having a tendency to continue growing to a late period may be checked by stopping the shoots moderately, facilitating the ripening by a high and dry temperature by day, turning off the heat and keeping the ventilators, except during frost, open at night. Afford water only at the roots to prevent the foliage becoming limp. This will harden the wood and tend to induce maturity of the growths.—ST. ALBANS.

The Kitchen Garden.

Celery.—The most favorable opportunities should not be lost for giving the necessary attention to Celery. All the earliest rows will now be finally earthed, and some will be in use. Rows that have not yet had much soil drawn round the plants should receive liquid manure, and plenty of water if the soil is somewhat dry. Useless leaves and suckers ought in the first instance to be pulled off, which will materially improve them; lightly draw the remainder together, and secure in an upright position with strands of raffia. This is better than allowing the leaves to hang about, where they become bent and broken, and do not assist in blanching the inner leafstalks and heart. While Celery is making growth it is not desirable to mould it up finally. This may be done a few weeks before wanted for use. During the earlier stages the soil should not be applied higher than the hearts, which must be free, in order that the plants can advance. When the roots have become thoroughly moistened, soil broken down round the plants greatly helps in retaining it.

Planting Lettuce.—If the seedlings are not too crowded there should be plenty of sturdy young plants suitable for planting out a few inches apart. Plant out as many as possible on good ground that has been well dug. The hoe may be plied between earlier established plants, these shortly being available for use. Beds of smaller seedlings may be thinned, and the plants allowed to stand through the winter.

Cabbage.—Insert a good breadth of plants from the August sown seed beds, placing them in rows 2 feet apart, each plant being allowed a space of 15 to 18 inches. They may be planted closer together than this if alternate plants are removed in spring and planted elsewhere, or cut closely to the ground for early use. Moderate sized plants of a sturdy character are better than those larger and stronger. Thin out those remaining. Small plants should be pricked out in a nursery bed, where they will grow and strengthen, and be available for spring planting.

Potatoes.—All Potatoes will be better out of the ground now, choosing fine dry weather for the work of lifting them. Spread the tubers on the surface of the ground, where they may remain for a few hours to dry; afterwards pick them over, discarding all the small fry and any that give the least indication of disease. Should the latter be apparent postpone the final storing for a few weeks, in the meantime keeping the tubers in a dry shed covered with straw, and look over them several times so as to remove any tainted specimens. This also insures the tubers being perfectly dry, an important matter when they have to be stored in bulk or clamped outdoors. At the same time pick out suitable seed tubers.

Parsley.—Prepare a bed for winter use by clearing out all weeds and superfluous plants, especially those which have produced seed stems. Sturdy plants throwing out strong leafstalks with curled foliage are the most useful. Stir the soil about them and encourage growth. Prior to bad weather protection is not needed, but on its advent a frame placed over the bed and covered with lights serves as valuable protection, but fully expose on all favorable occasions. Some sturdy old plants lifted and planted in the cucumber frame will provide some valuable pickings in early spring, when the outdoor supply is probably running short. The small plants from the August sowing may be lightly thinned and kept free from weeds.

Tomatoes.—Strong plants in 8-inch pots growing close to the glass

in a warm house should be setting fruit now. Encourage them to do this by careful attention to the requirements of the plants and dispersing the pollen at midday when the atmosphere is dry. If a moderate crop can be set it is not so difficult to develop it. Green fruit remaining on plants outdoors or on the summer plants under glass should now be cut and finished in a heated structure.

Cauliflowers.—A frame may be filled with seedlings which have been recently raised. The bed should be near the glass, and plenty of ventilation given. The strongest might be planted outdoors, three or four together, and covered with a hand-light. Also plant a bed in a sheltered position outdoors.—LYMINGTON, HANTS.



TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Book Wanted (F. P., Devon).—"Chemistry of the Garden," by H. Cousins, is obtainable from Macmillan & Co., London, price 1s., postage extra. It is one of the best little books a gardener could purchase.

Nymphaeas (Rev. C.—. S.—).—Mr. Raillem's notes referred to varieties, all of which are hardy with him in Essex.

Narcissus triandrus (Minor).—This charming little Narcissus is most suitable for culture in pots; pots about 4 inches or 5 inches in diameter. With this pretty species you could grow, in separate pots, of course, such others as *N. cyclaminens*, *N. Bulbocodium monophyllum*, *N. Johnstoni* Queen of Spain, and others that might be named, and which are also dwarf and excellent for potting-up. By securing good sound bulbs now, and using a light compost, plunging the pots under fibre or ashes, by February the bulbs will be placing indoors for flowering.

Lean-to Mushroom House (Z.).—Mushroom houses should be slightly sunk, as propagating pits are, for instance; their roofs are recommended to be made of thatch. You can furnish a Mushroom house simply by placing stout upright beams, 4 inches by 2 inches, close against the wall, and fasten on horizontal beams of the same measurements at right angles, at the top of the perpendicular beams. To the top horizontal beam, and also to the uprights at either side, nail your sloping joists, which of course will be fastened to a similar stout horizontal cross beam forming what will be the front part of the lean-to—the part ontermost from the wall. Stout posts, or a brick front, which is preferable, will be required at either corner to support the front horizontal beam. Then, having made your framework of outer beams with the downward sloping joists, proceed to nail on the wood to form the roof, which may then be tiled or slated. Wooden

roofing would not be required if it is resolved to employ a thatch. The front and sides may also be boarded in. If the lean-to is partly sunk you will require to arrange for two steps, or perhaps three, and the sides from which the earth has been excavated will require to be built up. Within the house arrange slate benches 2½ feet or 3 feet deep each; there may be two benches in a house 9 feet high. If you wish more definite information, write again please.

Selection of Dwarf Narcissi (A. B.).—We cannot do better than recommend to your notice Messrs. Barr's notes on these charming little subjects for rockwork, where their dainty flowers are seen to perfection. They should be left undisturbed for years, and, if happy, will soon establish themselves and afford a lovely picture in early spring. All the *Corbularias* (except *Corbularia monophylla*) like moisture, and should therefore be planted at the foot of the rockery. *Cyclaminens* also likes moisture and partial shade. *Corbularia monophylla* flourishes in a warm dry sheltered situation, and should be given a hot sunny nook, planted in almost pure sand; when coming into bloom give water freely. *Triandrus albus* (Angel's Tears) and *juncifolius* delight in partial shade and a light gritty soil, and should be given a well-drained



NARCISSUS TRIANDRUS.

position such as a sloping bank. In the case of these slender dwarf-growing Miniature Daffodils, the ground may be carpeted with close-growing, surface-rooting plants, such as *Arenaria cæspitosa*, *Thymus serpyllum* vars., *T. lanuginosus*, *Herniaria glabra*, Mossy Saxifragas, &c.; these plants provide a natural protection for these little bulbs, besides keeping their dainty blooms from being splashed and soiled in rainy weather. We prefer, however, seeing these little gems peeping out of grass, and where special banks are made or reserved for them we can supply seed of suitable fine dwarf grasses for sowing in September after planting the bulbs; this sowing will give a fine green carpet by the following spring, when the Narcissi bloom. The selection might include Large Sulphur Hoop Petticoat, White Hoop Petticoat (*C. monophylla*), Early Yellow Hoop Petticoat, Large Yellow Hoop Petticoat, cyclamineus, Lobularis, minimus, minor, nanus, Moschatus, Macleai, triandrus albus (Angel's Tears), juncifolius.

Old Scots Fir in very Bleak Position (E. G.).—The trees would probably be benefited by a dressing of basic cinder phosphate, 7 lbs. per rod, applying it from the stem outwards to a yard beyond the spread of the branches. This would probably act beneficially on the peaty soil, and not only add constituents to the soil, but liberate essential food. In the early spring it may be supplemented by a top-dressing in equal parts of bone superphosphate and double sulphate of potash and magnesia, applying $1\frac{1}{2}$ lb. per rod, and afterwards mulching about an inch thick with chopped up turfy loam. This may possibly help the trees, but when old coniferous trees once go back they are difficult to recuperate, and especially in very bleak positions. In a similar case we planted Austrian and Corsican Pines amongst (in sufficiently open places) and around the old Scotch Firs, and they not only thrive, but assisted the old trees, probably by preventing the draw under them, and thus formed a very interesting group. Those are the best coniferous trees for withstanding the full force of winds, whether land or sea.

Moss on Lawn (E. G.).—We have found the greatest permanent benefit from the use of a mixture of equal parts air-slaked lime, soot, and wood ashes, all by measure, applying a peck of the mixture about the middle of February, or as soon after as the ground was thawed, per rod, and repeating the dressing at a similar rate during moist weather in April. Where the lawn is very mossy we have found a top-dressing of rich compost—the rubbish heap debris reduced to mould, and the woody portions burned and thrown on the heap, a sixth part of air-slaked lime being added to the rubbish heap debris and mixed well with it—given in autumn at the rate of 20 tons per acre, $1\frac{1}{2}$ cwt. per rod, spread evenly and left until February, then raked well over, removing all stones and other rough material, very satisfactory, especially when a dressing was then applied of dissolved bones and best quality kainit in equal parts, mixed, at the rate of $3\frac{1}{2}$ lbs. per rod. There will perhaps be a little brownness in consequence of the destruction of the moss, but this will soon be recovered from, and the lawn acquire a deep green appearance. The advertised lawn manures are excellent for improving lawns, and the moss dies out gradually as the grasses, &c., gain the mastery.

Basic Slag for Destroying Yarrow (W.).—Basic cinder phosphate is a good manure for lawns, especially on strong soil and where there is a deficiency of lime in the surfacing soil, and it also has value on lawns that have a mossy and spongy bottom from long being under grass and consequent accumulation of vegetable matter. It certainly has a good effect on Yarrow; and, indeed, all plants peculiar to poor and light soils, especially when supplemented by dressing with kainit. We have not, however, found basic cinder phosphate entirely subdue Yarrow on a lawn, though by favouring the grasses, and particularly Clover and other leguminous herbage, the Yarrow was held greatly in check, as might be expected from the better growth of the other plants. A dressing of 7 lbs. per rod is not too much of basic cinder phosphate, applying it in the autumn, and then also supplying $1\frac{1}{2}$ lb. per rod of best quality kainit. We should reject, as not worth laying, turf consisting mostly of Yarrow, for where the grasses are to come from it is difficult to make out; but, if the Yarrow is not very abundant, why not extract it before laying down the turves? This we have found good practice, not only as regards Yarrow, but other weeds, carefully examining every turf and extracting the weeds.

Replanting Peach House (W. C.).—A house facing west is not a good aspect for early forcing, certainly not suitable for starting before the new year, and the fruit would not ripen before June. We should not advise your planting one sort exclusively. You will have accommodation for ten trees at 15 feet distance apart, and these may consist of Waterloo as a first early, of medium size, with good colour and excellent flavour; Hale's Early, medium size, good colour and quality; Condor, large, finely coloured, excellent flavour; Stirling Castle, medium size, bears freely, carries a good colour; Royal George, large to medium size, good colour and of great excellence; Early Grosse Mignonne, large, handsome; Dymond, very large, rich colour, excellent quality; Violette Hâtive, large, good colour, and first-rate quality; Bellegarde, large, handsome, and excellent quality; Goshawk, large, colour pale, grand flavour. These would give a succession over six weeks or more. If only three kinds wanted, and early, select Waterloo, Hale's Early, and Stirling Castle. You do not mention Nectarines; three good are Early Rivers, Lord Napier, and Humboldt. It would be advisable to cement the bottom of the border to keep out the large tree roots. The best plan is to place in a layer of concrete about 6 inches thick, and then

place bricks on flat and run in with cement. You must provide proper drain and outlet to carry off superfluous water, the bottom of the border inclining to it; also 9 inches of drainage, with 3-inch layer of old mortar rubbish. About 2 feet depth of soil is ample. If you procure trees that have been trained three or four years, and these have been recently transplanted so as to move with safety, there is no reason why you should not have some fruit the first season. Of course the trees must be carefully lifted, and planting done as soon as possible after the leaves fall.

Names of Fruit.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (*J. W., Cobham*).—Plum Wyedale, not River's Early. (*Cymro*).—Grape Buckland Sweetwater. (*R. C.*).—Apple King Harry, a splendid dessert Apple, too little cultivated. (*J. E.*).—1, Lane's Prince Albert; 2, not recognised, probably local; 3, Lemon Pippin. (*P. Taylor*).—1, Marie Louise; 2, Doyenné Boussoch; 3, Louise Bonne de Jersey; 4, Benrre Goubault; 5, Forelle; 6, rotten and smashed. (*H. S., Duns*).—58 and 148, Apple Irish Peach; 10e, rotten; 90, Maltster; 138, Du'ch Mignonne; 141, Norfolk Beefing; 151, Blenheim Orange; 153, Baumann's Red Winter Reinette; 160, Hawthornden. (*F. C. B.*)—1, Duchess' Favourite; 2, Sandringham; 3, Lord Burghley.

Names of Flowers.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (*Curious*).—No; not a "Crabapple," but probably a *Drosera*. We are unable to determine the species; could you send another fresh specimen? (*J. W. Cobham*).—1, see answer under "Names of Fruits;" you should number fruits and flowers separately; 2, Lobelia (next week) 3, Aster Amellus; 4, Aster dahuricus. (*W. F. T.*).—Solidago humilis. (*R. C.*).—1, Cymbidium pendulum; 2, Selaginella cœsia; 3, Pellionia Daveana; 4, Acalypha Macafeana; 5, Acalypha marginata; 6, Thuya (Biota) orientalis; 7, Cryptomeria japonica; 8, Thrinax radiata (syn *T. elegans*) or *T. parviflora*, we cannot determine from the specimen sent.

Covent Garden Market.—September 25th.

Average Wholesale Prices.—Fruit.

	s.	d.	s.	d.		s.	d.	s.	d.		
Apples, cooking, bush. ...	2	0	to	6	0	Lemons, Naples, case ...	24	0	to 30	0	
„ dessert	3	0		6	0	Melons, each	0	9		1	0
Bananas	8	0		12	0	Pears, English, $\frac{1}{2}$ sieve ...	2	0		6	0
Cobnuts, lb.	0	8		0	9	Pears, French, crate ...	4	0		9	0
Damsons, $\frac{1}{2}$ sieve	2	0		2	6	Pines, St. Michael's, each	3	0		4	6
Figs, green, doz.	1	6		2	0	Plums, $\frac{1}{2}$ sieve	1	0		3	0
Grapes, Hamburgh, lb. ...	0	6		1	0	Walnuts, $\frac{1}{2}$ sieve	5	0		6	0
„ Muscat	1	0		1	6						

Average Wholesale Prices.—Vegetables.

	s.	d.	s.	d.		s.	d.	s.	d.		
Artichokes, green, doz. ...	2	0	to	3	0	Lettuce, cos, doz. ...	1	0	to 2	0	
„ Jerusalem, sieve	1	6		0	0	Mushrooms, forced, lb. ...	0	8		0	9
Batavia, doz. ...	2	0		0	0	Mustard and Cress, pnnt.	0	2		0	0
Beans, French, bushel ...	2	0		3	0	Parsley, doz. bnchs. ...	2	0		5	0
Beet, red, doz. ...	0	6		0	0	Peas, bush. ...	4	0		0	0
Cabbages, tally ...	1	6		3	0	Potatoes, English, ct. ...	4	0		6	0
Carrots, new, doz. bnch.	3	0		7	0	Radishes, doz. ...	0	6		0	9
Corn Salad, strike ...	1	0		1	3	Shallots, lb. ...	0	2		0	3
Cucumbers, doz. ...	2	0		3	0	Spinach, bush. ...	2	0		3	0
Endive, doz. ...	1	0		1	3	Tomatoes, English, lb. ...	0	2		0	2½
Herbs, bunch ...	0	2		0	0	Turnips, doz. bnch. ...	2	0		3	0
Horseradish, bnch. ...	1	0		0	0	Watercress, doz. ...	0	6		0	8
Leeks, bunch ...	0	1	1	2	0	Veg. Marrows, per tall ...	2	0		3	0

Average Wholesale Prices.—Plants in Pots

			s. d.	s. d.				s. d.	s. d.
Aralias, doz. ...	...	...	5 0	to 12 0	Ferns, small, 100 ...	...	...	10 0	to 16 0
Araucaria, doz. ...	...	...	12 0	30 0	Ficus elastica, doz. ...	...	...	9 0	12 0
Aspidistra, doz. ...	...	...	18 0	36 0	Foliage plants, var., each ...	...	...	1 0	5 0
Campanula isophylla ...	...	...	4 0	5 0	Lycopodiums, doz. ...	...	...	3 0	0 0
Chrysanthemums, doz. ...	...	...	6 0	3 0	Marguerite Daisy, doz. ...	...	...	3 0	4 0
Crotons, doz. ...	...	...	18 0	30 0	Myrtles, doz. ...	...	...	6 0	9 0
Dracæna, var., doz. ...	...	...	12 0	30 0	Palms, in var., doz. ...	...	...	15 0	30 0
Dracæna, viridis, doz. ...	...	...	9 0	18 0	„ specimens ...	...	...	21 0	63 0
Erica gracilis, doz. ...	...	...	10 0	12 0	Shrubs, in pots ...	...	...	4 0	6 0
„ caffra, doz. ...	...	...	15 0	18 0	Solanums ...	...	...	8 0	10 0
Ferns, var., doz. ...	...	...	4 0	18 0					

Average Wholesale Prices.—Cut Flowers.

	s.	d.	s.	d.		s.	d.	s.	d.		
Asparagus, Fern, bunch	1	0	to	2	0	Mignonette, English, doz.	6	9	to 1	6	
Carnations, 12 blooms ...	1	0		1	3	Marguerites, white, doz.					
Cattleyas, doz....	12	0		18	0	bunches ...	1	0		2	0
Chrysanthemums, speci-						„ yellow, doz. bnchs.	0	6		1	0
men blooms, doz. ...	1	0		2	6	Odontoglossums ...	3	0		4	0
„ white, doz. bunches	2	0		4	0	Roses, Niphetos, white,					
„ coloured, doz. bnchs.	2	0		3	0	doz. ...	1	0		2	0
Eucharis, doz. ...	1	0		2	0	„ pink, doz. ...	0	6		1	0
Gardenias, doz. ...	1	6		2	0	„ yellow, doz. (Perles)...	1	0		1	6
Geranium, scarlet, doz.						„ red, doz. ...	0	6		1	0
bunches ...	3	0		0	0	Smilax, bunch ...	1	0		2	6
Gypsophila, doz. bnchs.	3	0		0	0	Stephanotis, doz. ...	2	0		2	6
Lilium lancifolium album	0	9		1	0	Stock, white, doz. bnchs.	1	6		2	0
„ „ rubrum	0	6		1	0	„ coloured, doz. bnchs.	3	0		0	0
„ longiflorum ...	2	0		2	6	Tuberose, gross ...	1	6		2	0
Lily of the Valley, 12 bnchs	12	0		18	0	Violets, single, doz. ...	0	9		1	6
Maidenhair Fern, dozen						„ double, doz. ...	3	0		4	0
bunches. ...	3	0		4	0						



The Two Sides.

To every question there are two sides, and each side seems the right one to the prejudiced onlooker. He is a cowardly man who will not dare or perhaps trouble to take a look at a matter from his neighbour's standpoint. Well, there are a good many of us prejudiced and narrow, to our shame be it spoken. There has been a great clamour lately about two questions relating to the milk traffic. The first question touched the composition of the milk; the second, the price. There have been many complaints from time to time as to the value of milk—i.e., as a food, and its value depended upon its constituents. There is milk and milk, and perhaps the casual buyer has little idea of the points of difference. If he had to analyse the milk he would soon find out, or even if he undertook to churn some, he would not be long in determining which was the richer of two or more "brands." The new regulations regarding milk are to act as safeguards for the unwary and ignorant buyer. When you ask for milk, see that you get it, get it free from taint or germ, get it fresh and pure, get it with its proper proportions of butter fat and solids. If the law is carried out in its integrity the consumer may have great cause for thankfulness, for he is getting a capital food at a very reasonable rate. How valuable the food is we cannot at present enter into, merely saying that honest milk is a perfect food in itself, requiring no other adjuncts of any kind. The next question is the question of price. There is a law known as that of supply, and demand. Last year, owing to various causes, our coal bills were nearly doubled, not because the winter was severe, but because there had been an artificial demand created, and prices went up at a bound. What did we do? Did we boycott the coal owners? Did we send abroad for the black diamond? No! we just had to pay and look pleasant. The same about our tea; the extra 2d. of duty was added, and we dare not rebel. Sugar, too, had to stand the extra ½d. Do we use other sweetening agents? we fancy not. And so on with many other necessities of life—none of these things are luxuries, they are needed daily in cottage or palace. We live in hope that the causes which have made these higher prices will be removed, and that we shall in time have things at a normal figure.

Now, then, for our argument. We are food producers for the multitude, and while giving them their milk we are trying to make a living for ourselves, and a mighty poor one it is sometimes. A great many of our customers quite overlook the point of our living—i.e., our profits; of course, it is no concern of theirs, but do they expect us to pose as philanthropists of the highest order? Do they expect us to be so forgetful of self as to let them enjoy the fruit of our labour without adequate return? From their attitude at present it looks it. Just now trade is very good, wages high, and money plentiful, and yet there is this petty squabble over the milk jug. A fair-minded man would make a few inquiries before condemning the farmer wholesale. He would say, "Why is it that I am called upon to pay more for my milk? There is no plague among cows; is there a shortage, and why?" We know we are on this question dealing with townfolk, and they are bad to convince. The first question we might ask is this, "You expect milk to be cheaper and more plentiful in summer than winter, and why?" Because it is the season for milk generally, and because grass feed is cheaper than hand feed. Yes, so it is when there is grass; but how few townspeople have thought of the weeks and the months of drought; we do not say heit, because drought and heat do not always go together. We may have long periods of cold, drying east winds that are anything but warm.

There has been practically no pasturage this summer; fields have been accommodated out of doors, and no more. There has been as much hand feeding as during winter, and this at the season when the farmer hopes to recoup himself for his past winter's outlay. He will still have the rent of the grass land to pay, bare as it has been, and there is worse in view. What about the hay and Clover crops? Where are the fodder stacks? Oh, they are there, but woefully small, and the Turnips have taken a backward step under the cold east winds and dryness that have been prevailing of late. We appear now to be in the middle of October rather than the middle of September. As we write now a gentle rain falls, but it is too late to do much for autumn grass, which will be but innutritious at best.

Even with all the helps to milk making in the shape of cake, meal, and other things, the supply has fallen off woefully, and milk masters have been at their wit's end to make up the necessary gallons. The dry summer, we say, town people might see and understand, but

there are two or three other little points that we do not expect them to take into consideration. They do not appreciate the fact that bought food is very costly, and they possibly have no idea as to the rise in price of all food stuffs (cattle food). Would it surprise them to hear that many commodities have risen in price from 20 to 25 per cent.? Who is going to pay the difference? it must come out of the milk. Then there is the question of labour. When we hear of farmers who cannot, at any price, get suitable milkers, and have to do the whole of the milking themselves, with the help of their families, things have come to a nice pass, and where the milkers can be got, they are asking, and getting, at least 20 per cent. more wage. This, too, has to come out of the milk. How will the buyer propose a remedy? What can he suggest? The labour of attending to cattle cannot be done by machinery, and the distribution of milk is of itself a most costly process. There will be, in the first instance, the conveyance of properly cooled milk to the station twice a day—man, cart and horse. There will be the railway journey—so much per mile per gallon. There will be the man, horse and cart, at the other end. Twice a day must he go his rounds; at some houses the supply is limited to a pint, but it has to be served out with as much regularity as the gallon. Do people consider the labour so entailed? Storm or fine, wet or cold, the farm man plods to the station; wet or cold the milkman goes his rounds, and is as civil to the pint customer as to the large consumer. The wage question has touched that man, too. He asks more; all other workers find their pay on the up-grade, and he must not be behindhand. And yet the customer grumbles at the extra ½d., and says we are asking a fancy price for one of the necessities of life! It is quite as necessary that we should live.

Then there is still another point. On and after September 1st, 1901, all milk sold must reach a certain standard of richness—quite right, too. But there are times that the farmer will find the extra food the cow requires to bring up the butter to Hanbury's standard will be a great tax on his revenues. For instance, all during this droughty summer how exceedingly onerous and expensive it would be with cows that are getting past their first youth, and nearing their calving again. There will always be the terror of "3 per cent. butter fat" before his eyes. If the farmer supplies a good article he must be adequately paid for it.

Work on the Home Farm.

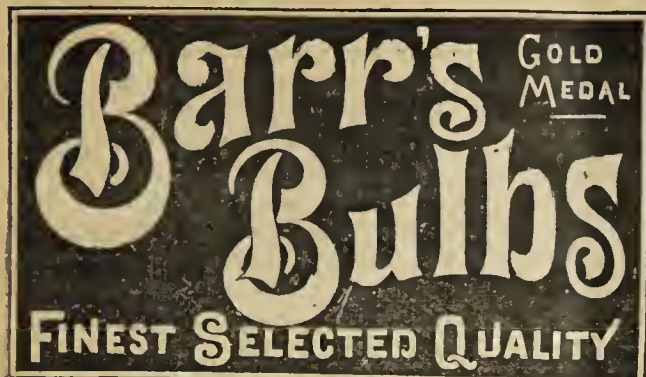
A good twenty-four hours rain has fallen, and it is possible to make a start at ploughing up seeds again. Another downfall is needed to make the ploughing go really well; still, "Half a loaf is better than no bread." The rain had been badly needed by Turnips, but we fear it has come too late. Never have we seen fine looking crops of roots go to the bad so quickly. Over large areas the leaves are flat on the ground. If they recover the revival can hardly be to a normal state of vigour, and the ultimate crop must be deficient both in quantity and quality. Mangolds are in direct contrast to Turnips, and doing splendidly. There has just been rain enough for them, and they do revel in sunshine. A great crop of these most useful roots will do much to supply other deficiencies, but why do not farmers insure their roots more heavily than they do by further extending the Mangold plot? We saw the last load carted from a Mangold heap to a yard full of pigs but two weeks ago. Swedes had been finished more than four months.

A field of Mustard sown about July 1st, after Trifolium, grew so well that it flowered and ran to seed before the sheep were ready for it. It has been allowed to mature for a crop of seed, and was cut with a string binder a day or two ago. This is not a Mustard country, and we feel somewhat out of our reckonings, but hope, with good weather, to get a fair crop. The straw is well corned, but the birds are very tiresome; there are thousands of sparrows around it.

The promise of a double crop of Potatoes will hardly be realised. The dreaded spot has appeared on leaves and stems, and in another week lifting will be in full swing. Many growers are thankful to be able to start, for labour is so scarce that a late Potato harvest might have landed them amongst some severe frost before all is made safe.

Lambs are not doing so well, and we hear of one or two cases of heavy loss, whilst our friend the vet. is run off his legs by applications for drerching. One owner, when his lambs began to go wrong, had them dipped immediately, with disastrous results from chills thereby contracted acting on an already feverish system. Many farmers are dipping their lambs a second time now, the first dipping having taken place in July. The second dip would have been more effective had it taken place within fourteen days of the first, and nothing would have been necessary now, when lambs are much more easily thrown wrong than they are at midsummer.

Sheep Dips, in which lime and sulphur enter in making, have been given a death blow by the American Wool Company of Boston, more effectual than a statutory enactment. This spring it instructed its buyers to refuse all wool that had been dipped in a lime and sulphur mixture. As this trust or company controls upwards of thirty of the largest woolen mills of the country, its orders in this respect will have commanding influence. A strong decoction of tobacco is fully as effective as the ill-smelling lime and sulphur dips, while there are several proprietary dips on the market that are safe and good for scab and ticks.



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Journal of Horticulture

THURSDAY, OCTOBER 3, 1901.

Neglected Varieties of Fruit.

IN addition to growing several kinds
of fruits rather extensively, I
also have good opportunities for
gleaning much useful information
among numerous private and
market gardeners, and these experi-
ences I am always ready and willing
to give others, not so well situated, the
benefit of. When discussing the merits of
various kinds of fruits I have discovered that a few
really excellent varieties have, in many instances,
been overlooked in a most unaccountable manner
by many good gardeners, and if my experience is
any criterion, then the great majority of the readers
of the *Journal of Horticulture* are equally to blame
in the matter.

Pears.

This has, on the whole, been a favourable Pear
season, the crops in many cases have been heavy,
the individual fruits of full average size, and the
quality particularly good. Excellent as some of
the early varieties have been in point of quality,
none have approached that of Clapp's Favourite.
This much neglected sort is of American origin,
meeting with scant recognition from the framers
of most catalogues, and cannot even be obtained
true from some nurseries I have dealt with.
Trees on the Pear stock (my so-called Clapp's
Favourite on the Quince were not true to name)
grow freely in a variety of positions; or whether
against walls or as pyramids and low standards in
the open, are naturally very prolific—that is to say
it is the fault of our climate if they fail to set good
crops, and, in a word, are as reliable as the trees
of most other varieties. The fruit are moderately
large, handsome pyriform in outline, very different
to the comparatively rough fruit of Williams' Bon
Carétien, and the skin, when ripe, clear yellow on
the shaded side, and beautifully shaded and striped
with crimson on the exposed side. The flesh is
buttery, or quite as much so as Doyenné du
Comice, equal in point of flavour to that esteemed

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variety, and altogether superior to Williams' Bon Chrétien, not leaving a rough, unpleasant flavour behind. Against moderately warm walls the fruit is usually fit to gather about the middle of August, while that produced by more exposed trees is about a fortnight later, or, say, a week earlier than Bon Chrétien. In common with other early Pears, the fruit ought not to be left on the trees till the dropping stage is reached. If gathered when the pips are quite brown the chances are the flesh will quickly become mealy, and a short unsatisfactory season be the result, whereas if a portion of the crop is earlier, and ripened in warm dark drawers or boxes somewhat artificially, the quality and appearance of the fruit is greatly improved and the season lengthened considerably. Specimens of Clapp's Favourite that I have given to fruit connoisseurs have proved regular "eye openers."

Apples.

Apples have not been generally productive this season; in fact they are scarce in many gardens. Two varieties I have been particularly impressed with, and these are Royal Jubilee and The Queen. In both instances the trees are of strong, sturdy growth, the foliage being remarkably bold, while the crops were heavy and the fruit very fine. Royal Jubilee is a market grower's variety, established as such, I mean, but it is equally worthy of inclusion in private growers' selections. The fruit are of the Codlin order, or about the same style as Lord Suffield, only they are very much heavier and keep much longer, or, it is said, till March. It cooks admirably, and is liked by some for dessert purposes. A friend of mine who owns several large orchards in Essex, considers Royal Jubilee one of the most reliable Apples in cultivation, and equally good reports come from the north of England. If I am rightly informed, The Queen, sent out, but not raised by Saltmarsh & Son, Chelmsford, was originally a sport, probably from Cox's Pomona, and the true variety has come from a single branch of tree. It appears that other portions of the tree have also got into cultivation under the name of The Queen, hence the difference of opinions as to the worth of the variety. I recently inspected a long row of grand trees of the true form, these bearing heavy crops of large, flat, round, beautifully striped fruit, quite equalling the abundance of Apples on the same trees last year. The Queen is a little too flat to please some buyers, but it is a crisp, juicy, agreeably flavoured fruit, whether cooked or eaten raw, any time from August to January, and pays well for growing. Trees of this variety should be found in more private gardens than is the case at present.

Plums.

Considering how heavily the trees as a rule were cropped last year, it is somewhat surprising to see such excellent crops of Plums again this season. Where the trees obtained sufficient moisture at the roots the quality of the fruit has been unusually good, the choicer dessert varieties being simply delicious. The Gage family have been very much in evidence this summer, but none have equalled in appearance the new Early Transparent Gage, and this variety has held its own in the matter of richness of flavour. The most beautiful fruit of this Gage I saw anywhere this season, and many dishes have been shown at the West of England exhibitions, were gathered from a low, standard tree growing in an Essex garden. The variety is well worthy of wall space, but should also be tried as a half-standard. Mitchelson's is a much older sort, and far more neglected than the variety just previously alluded to, and, as a matter of fact, is not often seen planted outside of market gardens. This I hold to be a mistake, as it is certainly superior in point of quality to many varieties that are favoured with good sites against walls, and is one of the best for growing as a standard. The tree is of a free yet most productive habit of growth, and seems particularly well adapted for clothing high dwelling-house walls with a western aspect. Some fruit I gathered from a heavily cropped wall tree late in August were quite as handsome, and nearly as rich in flavour, as the best samples of Kirke's, they only differ in being rounder and having slightly shorter stalks, the colour of skin being dark purple and the flesh greenish yellow in both cases. In the open the trees of Mitchelson's were equally as productive as those against walls, the fruit ripening during the first fortnight in September. Kirke's is a comparatively shy bearer, and, all things considered, ought not to be invariably selected in preference to the hitherto neglected Mitchelson's.

Peaches.

Hot summers bring out the good qualities of Peaches and Nectarines in the open, but are somewhat trying to the trees under glass, especially when it is scorching hot in May and June. I could write whole chapters on the behaviour of various varieties under trying conditions, but must content myself on this occasion with brief allusions to one Peach and one Nectarine. There seems to be a prejudice against Peaches with more or less yellow skins, and whose flesh in most cases is stained with red next the stones. This may have something to do with the neglect of Osprey. In this instance the skin is a pale yellow when ripe, with a crimson stain on the exposed side, and on the whole is not very attractive in appearance, but when thoroughly ripe the flesh is melting and most pleasingly flavoured. The tree is moderately strong in growth, flowers profusely, and sets crops so very freely that there is always a danger of underthinning of fruit to be guarded against. Osprey is a late variety, ripening at the same time as Walburton Admirable, and it is in that direction where its great value lies—viz., its late-ripening, long-keeping properties. According to the "Fruit Manual," Osprey was raised by Mr. Rivers from Pitmaston Orange Nectarine about the year 1860.

Nectarines.

Nectarine Humboldt was raised from Pineapple Nectarine, and has been neglected in many instances in favour of the latter, to which it bears a strong resemblance. As it happens, both are well worthy of cultivation, Humboldt ripening a week or ten days earlier than Pineapple. Some of the most attractive Nectarines I saw anywhere this year were of the Humboldt variety. They were large, perfectly formed, the skin very heavily mottled and striped with crimson, and the flesh deep orange in colour with a crimson stain next the stones, while the quality was equal to that of the best Pineapple. Young trees of both Humboldt and Pineapple are apt to be disappointing, not setting good crops nor producing such large, handsome fruit as expected. When they get older, however, a marked improvement takes place, better crops setting, while the fruit develops both the size and colour looked for vainly in earlier years. By this it will be seen how careful cultivators ought to be of their large old trees of these two Nectarines, doing all they can in the way of renovation, both above and below the surface of the ground, rather than root them up to plant new trees. It is sometimes asserted that very little regard is paid to the quality of fruit that is to be sent to the markets, but those who have presentable samples of Humboldt and Pineapple Nectarines to dispose of, may quickly learn that the Covent Garden buyers, at any rate, fully appreciate the value of these varieties.—W. IGGULDEN.

Imperial Kew.

Kew—royal Kew, has initiated many botanical schemes of untold financial importance to our colonies and possessions, either by pointing out the varieties of plants indigenous to the country which are most worth exclusive cultivation, or by introducing the most suitable plants from countries many thousands of miles away. In this way an extensive distribution of seeds and plants takes place each year at Kew. The plants may be brought from America, revived, nursed, and then repacked to, say Australia, or *vice versa*. Thus in 1861 the Cinchona of the Andes in South America, which was becoming rapidly destroyed, and so costly that quinine was almost worth its weight in gold, was conveyed to India. After many disappointments and adventures the varieties planted have resulted in a golden harvest of money and health to that country. Since 1893 a dose of five grains of quinine has been obtainable at every local post-office in Bengal for about a farthing. So with indiarubber, also once confined to South America. Till quite recently none of these trees were brought into extensive cultivation, it had not even been settled which were the best for cultivation. Now it has been introduced to India, and the cultivation is to be taken up by the Government on a large scale. Gutta percha did not come under notice till 1846, when it was plentiful in Singapore forests; within the next five years it was totally destroyed there, and the same was happening in Penang and Malay, till Kew stepped in and urged systematic cultivation. A seedling of Barbadoes Sugar-cane has yielded wonderful results in Queensland, and is honourably named Kewensis. These instances might be multiplied a hundredfold. This year, for instance, there has been under observation two or three South African plants said to be specifics in dysentery. With such initiative rendered by Kew our new possessions may develop resources above ground of no less value than those buried in the mines. Meanwhile, it is no exaggeration to say that Kew is no whit behind the most advanced department of the State in doing a grand imperial work, the full harvest of which has yet to be gathered by generations unborn.



Cattleya × Hardyana Rochfordiana.

The plant from which Mr. Shayler, our artist, made his sketch of the accompanying flower of the above hybrid was shown by Mr. Thomas Rochford, of Turnford Hall Nurseries, Broxbourne, Herts, at the Royal Horticultural Society's meeting on September 10th, and received a first-class certificate. It is a most beautiful variety, with

lovely white petals and sepals, against which the purplish lip, large and frilled, stands out in exquisite contrast. The lip is streaked with orange colour. According to one of the most reliable authorities, this variety comes nearest to C. × H. Statteriana; it also resembles in general appearance a well-developed bloom of C. aurea. We recommend this as one of the finest Cattleyas now certificated.

The Week's Cultural Notes.

It often happens that Cattleyas of the labiata and other sections, *Lælias purpurata* and *superbiens* and similar plants, get into a habit of concentrating all their energies to the production of one stout leading growth, and fail to push back breaks. In consequence the plant is one-sided, and as there is an

end even to the possibilities of strong growth, the plant may be said to waste its energies. Such specimens may be greatly improved by notching the rhizome with a view to cutting it to produce back breaks, and now is the best time to set about it.

It is not wise to sever the rhizome entirely, as the value of the plant is thereby lessened; besides this too great a check is given at the outset, and the end in view may be retarded rather than hastened. But unless the incision is at least two-thirds of the depth of the rhizome it will be useless. Some cultivators choose the spring for these operations, but if done now the back eyes have time to plump up during the autumn and winter, and will start more freely in spring; at least, this has been my experience. There are other plants, such as *Miltonias*, *Odontoglossums*, and *Oncidiums*, in fact most pseudo-bulbous species, that may be improved in this way, but

the time for doing so will vary according to the time the plant flowers.

The bulbous section of *Oncidium*, such as *O. Cavendishianum*, *O. luridum*, and others, are an interesting and useful set of plants. Just now they require all the light possible, as their large leathery leaves act somewhat in the same way as the pseudo-bulbs of those Orchids that bear them, and unless they are properly developed the flowers produced will be few, and the plants will suffer in health. If they have been grown, as they should be, in a good light, and are therefore hard and firm in texture, they will now stand the full sun, and be all the better for it.

Continue to place the *Dendrobiums* in a cool light house as the growths finish, but see that the last leaf is properly formed and the pseudo-bulb complete before doing so. Take especial care with the early plants that are intended to flower first, and keep them quite dry

as soon as the growths are sufficiently hardened to stand it without shrivelling. *D. aureum*, *D. nobile*, and *D. Wardianum* are usually the first three in the order named. It is too early as yet to put any into heat, but about six weeks should be allowed to the time when they are required in flower.

Stanhopea grandiflora.

The *Stanhopeas* for some reason have been under the ban of the cultivator's displeasure for some time, and many of the largest collections contain only a very few specimens of which little notice is taken. But the beautiful pure white *S. grandiflora* is a superb Orchid, and as easily grown and forced as any in the family. Its large waxy white flowers are deliciously scented, a single speci-

men in flower perfuming the whole of the house in which it is grown. The only thing that can be urged against it is its somewhat evanescent character, but as it flowers several times in the year this is a minor matter.

I have had capital results by using rather large but shallow wooden baskets in place of the usual kind made of wire. These have rough lumps of ballast in the bottom, and a thin surfacing only of rough peat and sphagnum, with a little fibry loam for the strongest plants. All the year round the plants are kept moist at the roots, and a constantly moist atmosphere conduces to healthy foliage free of insect pests. A thorough soaking of the compost should be given just as the flower spikes are forming, and this will last for a little while, as it is impossible to water the plants when the blossoms are open, for fear of injury to the latter.



CATTLEYA × HARDYANA ROCHFORDIANA.

Schomburgkia tibicinis.

Though not in the first flight for showy flowers, this species is very interesting; it flowers, moreover, at a dull season for Orchids, and is of easy culture. Some growers have found it shy flowering, but in some cases this has undoubtedly been due to want of proper consolidation of the growth in autumn and winter. Treated like *Lælia superbiens*, to which fine plant it bears a certain resemblance, it will flower regularly. Ample pot room and a rough compost suit it best.

A Fine Dendrochilum.

Dendrochilum glumaceum is in a small state rather an insignificant looking plant, but when really well grown into a large, healthy specimen it is a most beautiful Orchid. I recently noted a large plant suspended from the roof of a tiny greenhouse in one of the suburbs of Bristol, and although growing among a collection of Ferns and warm greenhouse plants it was in perfect health, the long drooping racemes hanging about the basket in rich profusion. In the words of the cultivator—who, by the way, is quite a beginner in Orchid culture—"the plant has had no special treatment, and has been in the same basket for three seasons, with only a little top-dressing every autumn. It was purchased at a sale of newly imported Orchids, and in the three years has almost doubled itself in size."

This is another instance of the satisfactory way in which plants come away when newly imported, though, to judge from the look of the plant noted, it has a long life before it. *Dendrochilums* or *Platyclinis*, as they are also known, like ample light while growing, and a warm house well charged with moisture. In this connection travellers in the Philippines tell us that the air is so humid that leeches inhabit the trees "as if they were terrestrial."—H. R. R.

Early English Gardening.

(Concluded from page 296.)

WE have recorded all that can be stated with certainty respecting English gardening previous to the Conquest; but, in the absence of positive documents, much of our information is, of necessity, either inferential or conjectural. But, coming now to a period, the account of which has been written, and of which we possess some existing records, we are enabled to ascertain with greater certainty the state of gardening during that period, and to watch, in some measure, its gradual development.

During these periods, marked by a continued series of intestine broils, the continued invasions of the Danes, who finally established their power in the island, A.D. 1017, and who, in their turn, were succeeded by another conquering dynasty in 1066, in the person of William I., horticulture continued unimpaired and silently to advance. Nor is this a matter of surprise, for the Saxons and Danes, when they won a better home than they had left in their native land, came as students in the arts of civilisation, which their successive sovereigns (Alfred and Canute need alone be instanced) used every means in their power to foster and improve. They came not, as did the Caliph Omar to Alexandria, to destroy those acquirements as useless which he did not already possess. That the conquest of a polished nation, by others more barbarous than themselves, is not productive of that lamentable decay of civilisation that at first sight might be apprehended, is further instanced by the result of the conquest of the Roman state by the Goths. The estimable arts of civilisation were prized and studied by the brave and manly nations of the north, whilst the meretricious ornaments spread over them by the effeminate Romans were despised and swept away. It is only a savage, or a bigot, that conquers to destroy; the Saxons, the Danes, and the Goths conquered to improve their own comfort and condition, which alone could be effected by sustaining the superior arts pursued by the nations they overcame.

In the previous chapter we have noticed the vineyards of the Anglo-Saxons, and the Normans did not decline from this attention paid to the Vine by their predecessors. At Edmondsbury, in Suffolk, the monks of its monastery planted a vineyard in 1140, and William of Malmesbury, their contemporary, says that vineyards were possessed by barons as well as monks, and that the Grapes of the Isle of Ely furnished wine next best in quality to that from the Grapes of the vale of Gloucester. Among other places, it is evident that Winchester was at a very early period celebrated for its vineyards, for among our most ancient literature are verses allusive to them, and this line—

Testis est London ratibus, Wintonia Baccho,

is quoted by Twynne ("De Rebus Albionici," 116) in proof that Winton, afterwards named by the Saxons Winchester—that is, the City of Wine—was so called because there was the best vintage in Britain.

Another old monkish verse is—

Quatuor sunt Eliæ; Lanterna, Capella, Mariæ;
Et Molendinum, nec non dans Vineæ vinum.

It is translated thus by Ralph Austen:—

Four things of Ely town much spoken are,
The leaden Lanthorn, Mary's Chapel rare,
The mighty Millhill in the minster field,
And fruitful vineyards which sweet wine do yield.

Of Canterbury and that neighbourhood, the same author makes the abbot of St. Augustine's say that their house was formerly not destitute of Vines; and Somner informs us that, in the year 1285, both that abbey and the priory of Canterbury were plentifully furnished with vineyards.

At Rochester a large piece of ground adjoining to the city is now called the Vine; another is so called at Sevenoaks, in Kent; this also is the name of the seat formerly of the Barons Sandes, in Hampshire. At Halling, near Rochester, the Bishop of that see had formerly a vineyard; for when Edward II., in the nineteenth year of his reign, was at Bockingfield, Bishop Hamson sent him thither, as Lambard tells us, "a present of his drinkes," "and withal both wine and Grapes of his own growth in the vineyard at Halling." Captain Nicholas Toke of Godington, in Great Chart, in Kent, "hath so industriously and elegantly," says Philipot, "cultivated and improved English Vines that the wine, pressed and exacted out of their Grapes, seems not only to parallel, but almost to outrival that of France."

Of Sussex, Lambard writes, "History doth mention that there was about that time (the Norman invasion) great store of Vines at Santlac (near to Battel)." He adds, as to Berkshire, "the like whereof I have read to have been at Windsor, in so much as tithe of them hath been there yielded in great plenty, which giveth me to think that wine hath been made long since within the realm, although in our memory it be accounted a great dainty to hear of." He further observes that some part of the wine was spent in the king's household, and some sold for the king's profit.

Domesday Book mentions at Ragenia, in Essex, one park and six arpenies of vineyard, which, if it takes well, yields twenty modii of wine. And at Ware, a park and six arpenies of vineyard very lately planted. We hear of vineyards also in Middlesex, Cambridgeshire, at Denny Abbey, the Isle of Ely, at Dunstable, and at St. Edmundsbury, in the engraved plan of which town the vineyard of the abbey is particularly noted. Within the walls of the City of London there is a street called the Vineyard; and others in the liberties and suburbs, and in Westminster; there are also the Vineyards of Houndsditch and Coldbath Fields.

In the Journal of Works at Windsor, in the reign of Edward III., which is preserved among the Exchequer Records, we find every operation of Vine culture detailed by the keeper of the vineyard at Windsor Castle, from planting, grafting, and manuring, till the pressing of the fruit, the making and repairing of the casks, and the barrelling of the wine. The superintendence of this Windsor vineyard was, for some time, entrusted to one Etienne de Bordeaux, who, no doubt, was brought over from Guienne.

In the archives of the church of Ely is the following register:—

Exitus Vineti	...	...	...	...	...	...	2	15	3½
Ditto Vineæ	...	...	...	...	...	...	10	12	2½
10 bushels of Grapes from the vineyard	...	...	...	...	...	...	0	7	6
7 Dolia Musti from the vineyard, 12 Edward II.	...	...	...	...	...	...	15	1	0
Wine sold for	...	...	...	...	...	...	1	12	0
Verjuice	...	...	...	...	...	...	1	7	0
For Wine out of this vineyard	...	...	...	...	...	...	1	2	2
For Verjuice from thence	...	...	...	...	...	...	0	16	0

No wine, but verjuice made, 9 Edward IV. Hence it appears plainly that, at Ely, Grapes would sometimes ripen, and the convent made wine of them; and when they did not they converted their produce into verjuice.

In Northamptonshire, Martin, Abbot of Peterborough, in the time of King Stephen, is said expressly, in the Saxon Chronicle, to have planted a vineyard, and it was a large one. Madox, in his History of the Exchequer, writes that the sheriffs of Northamptonshire and Leicestershire were allowed in their account for the livery of the King's vine-dresser, at Rockingham, and for necessaries for the vineyard. There are evidences of vineyards still farther north, as at Darley Abbey, in the county of Derby. In the reign of Henry III., the neglect of vineyards in England is attributed by Twynne in part to that fondness for French wine which then came upon us. In this King's time, about the year 1260, a dolium (thirty-six gallons) of the best wine could be bought for forty shillings, sometimes for two marks, and sometimes for twenty shillings. This neglect and decrease of vineyards may be traced to the time of Henry II., who had acquired possession of Guienne, in right of his consort, Eleanor of Aquitaine, and the encouragement and protection given to the wines of Guienne and its neighbouring parts, which were all known as Gascony wine.

was soon evidenced by our statutes. Thus, by 27 Edward III., cap. 5, it was made felony to forestall or engross this wine, or even to have an agent in Gascoyn, before "the common time of vintage passage;" so, according to the mistaken policy of the period, private energy and enterprise might not have any advantage in purchasing that which was so generally in request. From the circumstance of the Vine being so much more cultivated at that period than it is now, it has been argued that the climate of this country must at that time have been warmer than now; but a little consideration of the taste and habits of the people will tend to dispel that which has now become a popular error. Verjuice was then used to a large extent in the soups, sauces, and other dishes; and, while in some seasons wine of ordinary quality might be made, in those seasons that the Grapes did not ripen they at least furnished verjuice, if they did not wine. That the wine made at that time was of inferior quality is evident from the fact that, as soon as Henry II. acquired possession of Guienne, in right of his consort, Eleanor of Aquitaine, vineyards in this country began to decrease, and wine making to be relinquished, in favour of the superior produce imported from Bordeaux.

The earliest English author we know of who has treated on the subject of gardening is Alexander Necham, master of the grammar school of St. Albans, at the end of the twelfth century, and afterwards abbot of Cirencester. He was born about the year 1157, and died in 1217. His work, "*De Naturis Rerum*," of which there are two manuscript copies in the library of the British Museum, is a collection of treatises, both secular and theological, many of which relate to gardening subjects; but the work bears every appearance of being, to a great extent, a compilation from the Roman agricultural writers, for he treats of many plants that are only to be found in southern latitudes, and which could not have existed in this country even for one year. He seems to have had some practical knowledge of the subject, inasmuch as he notices varieties of fruit which were then cultivated, as the St. Règle Pear; and he also enumerates Apples, Chestnuts, Peaches, Almonds, and Figs; but when he goes on to mention Citrons, Golden Apples, Oranges, and Pomegranates, our faith fails us, and we are compelled to accept his narration with caution. From him we learn that the process of grafting was then, as now, generally practised, but he makes little mention of the Vine.

Fruit and Flowers in Queensland.

HALF an hour's stroll in the grounds of the Acclimatisation Society at Brisbane will bring to the view of the stranger Strawberries, imported from England, France, the United States, and New Zealand, growing alongside Pine-apples which have come from Florida, the West Indies, and Singapore, and many plants of both Pines and Strawberries, the whole in full fruit. English and Himalayan Blackberries, just through with their spring and early summer crop, standing within a stone cast of Mangoes from Bombay and Mauritius, and a Custard-apple from Brazil, all promising a satisfactory harvest for the coming mid and late summer. Just on the margin of a large patch of tall Sugarcanes, consisting mostly of Bowen Park, West Indian, and Demeraran selected seedlings, can be seen Rock and Musk Melons, maturing on the same strip of land that ripened Tomatoes during the recent mild winter, and which will probably be called upon again directly to carry an early winter crop of Cauliflowers.

The filling of one section of the grounds is suggestive of an extensive itinerary, as here are flourishing examples of Rhubarb from Siberia, English Apples and French Lavender, Spanish Chestnuts and Italian Olives, a Mulberry from Constantinople, Smyrna Figs, Persian and Soudanese Date Palms, Heena from Egypt, Coffee and Castor Oil from Arabia, a hedge of Kai Apples from Cape Colony; Jackfruit and Tamarinds, Teak and the Toddy Palm from India; Cinnamon from Ceylon, and many East Indian representatives, such as Ginger, Croton oil, patchouli, nux vomica, and Rice, *Arenga saccharifera* from the Philippines, Litchies and Tea from China, Central Asian Buckwheat and Japanese Cumquats. Again Persimmons, California Redwood, *Rondeletia* and *Monstera* from Mexico; Limes from Tahiti, Taro from the South Seas, Central Australian Saltbush, Flax from New Zealand, Mate from Paraguay, and Green-heart from British Guiana, with many plants from intervening portions of South America, including Cocaine, Tobacco, Guavas, and Tapioca, Granadillas, Logwood, Guttapercha, and Mahogany from quite tropical and Central America, Allspice and Alligator Pears from the West Indies, and Pecan Nuts from Texas.

A flower border in the same grounds further emphasises the lesson, for in it, in their season, can be seen in splendid flower Daisies and Hibiscus, *Ranunculus* and *Frangipangi*, Snowflakes and *Ipomæa*, *Horsfalliæ*, Jonquils and Gardenias, Larkspur and *Poinsettias*, Geraniums, Fuchsias, Hydrangeas, Wallflower, Sweet Peas, Dahlias, Freesias, *Chrysanthemums*, Hollyhocks, and English Ivy, along with

Azaleas, various Orchids, Allamandas, *Gelsemiums*, and the Rangoon Creepers.

Without entering the shelter of glass houses, wherein it is usual to protect plants designed for the tropical North, such as Cocos and Vanilla, and passing the packing shed, through which may be seen in the winter time such plants as Cherries and other stone fruits destined for the elevated inland portions of Southern Queensland. Should further evidence be required to carry conviction, one minute's longer stroll over a sward composed mainly of tropical Buffalo Grass and English Clover, will take the visitor to a pond, within which, flanked on one side by Burmese Bamboos, and on the other by a Weeping Willow, can be seen growing from seeds ripened in the open air, and soon now to be in full bloom together, the British white Water Lily, culled originally in a tiny Welsh streamlet, and the giant Brazilian *Victoria Regia* from the mighty Amazon. All these are included in the gardens of Queensland, and must surely tempt many of us at home to journey to this luxuriant Antipodean land.—SCRIBE.

Coniferae.

THE Cedar of Lebanon is the most magnificent and picturesque of the Conifers. It is more remarkable for the enormous expanse and number of its branches than for its height. The Cedar is, in its appearance, the most majestic of trees, especially when it stands alone in a situation worthy of it. There is a firmness in the bark and a stability in the trunk in the mode in which that lays hold of the ground, and in the form of the branches and their insertion into the trunk not found in any other Pine, scarcely in any other tree; indeed the very air of the tree impresses one with the idea of its comparative immortality. This tree is so well known that it is hardly necessary to give a detailed description of it. Unfortunately its very dense habit makes it very liable to injury from heavy falls of snow. Many fine specimens up and down the country are sadly disfigured in this way.

The Cedar seldom yields cones before it is forty, and sometimes not before it is one hundred years of age, and it is not until the tree has produced several crops that the seeds can be depended on to vegetate. It is a native of Mount Lebanon in Syria. The exact date of introduction into this country cannot be fixed with certainty, but it was shortly after 1664. There is a variety with glaucous foliage named *argentea*. *Cedrus atlantica*, the Mount Atlas or African Cedar, does not appear to differ much from *Libani* in its young state. The tree is somewhat stiffer, the branches shorter, and the leaves are also shorter, thicker, and more prickly. It is also of more erect pyramidal habit than the Cedar of Lebanon.

Cedrus Deodara.

The Deodara or Indian Cedar, although differing in habit, presents no essential characters which, in the opinion of some eminent botanists, ought to separate it from *C. atlantica* and *C. Libani*. Indeed, the rank of a separate genus has been denied to them by many authorities. The Deodara is a native of India, and in the Himalayas attains a height of 150 feet, with a trunk 30 feet in circumference. The leaves are either solitary or tufted, and very numerous, larger than those of the Cedar of Lebanon, and of a dark bluish green, covered with a light glaucous bloom, as are the young branches. It grows more rapid, and its habit is more symmetrical and graceful than the Lebanon Cedar. The Deodara is quite hardy, and is deservedly a universal favourite. For ornamental purposes it grows in any good soil, but appears to thrive best in sheltered positions. It may be pruned into shape if desirable; if injured by a severe winter or other causes, a new leader and fresh branchlets are readily formed. The pendulous leader of the Deodara changes its direction every year; it makes a complete revolution in three years, and so ascends like a screw.

The wood is very valuable, and much prized in its native country. It is accounted sacred by the Hindus, and is generally met with in the neighbourhood of their ancient temples. It is also used in building houses, bridges, and in other ways, and is very strong and durable.

Thuopsis dolabrata.

This is the Japanese Thuya, or the Hatchet-leaved Arbor Vitæ. Its habit is of the most elegant character, and its foliage is so nicely cut and so regularly disposed, that it looks as well as many of the Club Mosses that are cultivated indoors. As an ornamental tree it takes a high rank; its growth is at first rather slow, but when well established in a suitable soil and situation it makes a beautiful tree. In its native country it attains a height of 40 to 50 feet. It is much thought of by the Japanese, and is cultivated by them in pots. *Thuopsis* is quite hardy, and makes a good vase plant; it bears pruning well and makes a capital bush, and in this form is suitable for the foreground of the shrubbery, or for planting on banks in company with common Savin, being of a different green.—PINUS.



Disbudding and Feeding,

THE grower for exhibition is anxious to secure and partially develop as many buds as possible before the end of September, knowing well that buds retained at that period, ranging from the middle of August to the end of September, will give him blooms which not only develop at the right time, but are of large size and good quality. Later buds may be secured, and in some cases they will produce blooms of a satisfactory character, the incurved, reflexed, and pompon varieties especially, as these may have the terminal buds selected, gradually rubbing out others. For producing a display of bloom for other purposes than exhibition, the retaining of special crown buds is not absolutely essential. Well-grown plants with vigorous roots can furnish admirably coloured, well formed, and medium sized blooms from terminal buds, and it will be found that at this period numbers of varieties are just producing the buds in question.

The terminal buds appear in clusters of several, and the largest only is the best to retain. The reduction of the side buds must, therefore, be commenced, disposing of a few at a time until the main bud is perfectly alone, when it will have the chance of swelling to a good size, helped by generous treatment and correct watering. In addition to the removal of superfluous buds, side shoots which constantly appear must be rubbed out. Where there are a number of growths to one plant provision must be made to space them out separately, as the admission of light and air is important for the welfare of the foliage and the ripening of the wood. When pots are well filled with roots feeding assists the plants to a great extent in multiplying the active fibres, and giving the needed stimulus to the swelling and development of the buds. Almost any kind of animal manure soaked in water, and the liquid given in a weak state at first, increasing its strength later, is beneficial. Soot water is very helpful, giving tone to the foliage and depth of colouring to the flowers. Dustings of artificials may also be given as a change of diet. The various preparations adapted chiefly for the requirements of Chrysanthemums may be employed, or those known as general fertilisers can with safety be applied.

Regularity in watering is as important as the application of stimulants. Allowing the plants to become thoroughly dry does considerable harm, and no elaborate preparation can make up for the lack of moisture as given by the needful supplies of clear water. Prior to feeding with manure water or other stimulant it is requisite to well moisten the soil in the pots with clear water before giving rich liquid food. A slight top-dressing of artificial manure mixed with soil is favoured by some growers, but room must be left in the pots to receive the material, afterwards supply moisture with a rosed can so as not to displace the dressing. The strongest rooting plants require considerable attention in the supplying of water, and they may be fed oftener than others less vigorous. Plants in small pots, too, will take more frequent supplies both of water and liquid manure, as the rooting material being fully occupied with roots has had its food abstracted by them, therefore the frequent supply of more is absolutely essential, in order to maintain the plants in health and vigour for carrying out their mission of flowering freely and satisfactorily.

Plants in an active condition at the roots and stood on a moist base are apt to root through into the ground below. It is, therefore, desirable to twist the plants round or lift them up to prevent this, especially prior to housing, as the sudden detaching of roots from the base if they had rooted well into the soil might cause an undue check. Most cultivators avoid this by standing their plants on slates or boards from the first.—E. D. S.

National Centennial Tree-planting.—With a view to mark in a special manner the advent of the twentieth century, the close of the longest reign on record, and the accession of King Edward VII. to the British Throne, Mr. Ellis Lever, Colwyn Bay, near Liverpool, makes an excellent and timely suggestion. His proposal to commemorate these three events of 1901 is that all county, municipal, urban, and parish councils throughout the United Kingdom should unite to beautify the highways, byways, streets, squares, commons, and playgrounds by planting before the close of the year a variety of suitable trees for shade, and to render more attractive as the years roll by both town and country. Mr. Lever expresses the opinion that eminent men and women should be invited to undertake the planting of these memorial trees, which might be signalled by public ceremonial in each county.

Magnolia conspicua.

THE inscription beneath the illustration of this most beautiful subject on the opposite page states that it was grown at Wynlass Beck, Windermere, in Westmoreland. The air in this northern county is soft and mild, which explains the exuberance and floriferousness, so far north, of a subject that is generally deemed only tractable when treated to the sunshine and the mellow breezes of our southern latitudes. We present the subject as it appears in Mr. Mawson's elaborate "Art and Craft of Garden Making," a review of which appears below. The illustration is one of a large number that are included in this delightful and practical book to emphasise the use of certain subjects in conditions suitable to them. Of course there are numerous other illustrations of a purely diagrammatical and practical nature. *Magnolia conspicua*, *M. Soulangeana*, and *M. Lenné* are three useful species for training as climbers against walls. Much more might be done to introduce Magnolias to our gardens; their foliage itself is handsomely ornamental, and most of them grow with comparative vigour.

Book Notice.

"The Art and Craft of Garden Making."*

When the first edition of "The Art and Craft of Garden Making" appeared a year ago the pages of our Journal accorded this handsome volume a full measure of compliment and praise, detailing the scope of treatment and ability exhibited by the author, while special attention was directed to the prodigality and careful execution of the useful illustrations that form a very special feature of this work. The success which we hoped would attend such an elaborate and able publication has been attained, and only pressure of other duties has restrained us from the sooner noticing the advent of a second edition.

The author's principles of design are largely such as have been practised since the time of Sir Uvedale Price, and later on, J. Clandins London. Mr. Mawson's rules are that grounds immediately surrounding the house or mansion should present some coherence and uniformity with the style of architecture adopted. Thus for Grecian designs there would be more of a strictly geometrical plan adopted in the making of the contiguous garden, easing off the formalism by degrees as distance was measured between the house and the further lying grounds. In houses whose outline presents rounded curves, the freer gardenesque design, as opposed to the geometrically formal, could be brought right up to the walls of the building, because there would here be a true coherence and conformity. Mr. Mawson has not followed the elder school of garden designers in every principle, however. His good sense leads him to deprecate the law of "deceptive planting," which was that perspective was obtained by a system of planting trees with deep toned foliage as a background to the lightest tinted trees that could be selected for foreground employment. Again, the older masters practised the art of deceiving one as to the apparent extent of gardens and grounds when these happened to be less extensive than the dignity of the mansion demanded. Their principle was never to show more than a very restricted area of ground in any single view. By certain rules in planting this was easily managed, and very limited domains were falsely impressed on one as being much more extensive than they really were, from the fact that the designer's art had prevented any view of the grounds as a whole from being apparent in one comprehensive survey.

In the choice of trees and shrubs when planting, the author prefers masses of one species rather than a great mixture. This is laudable when woods and forests are the subject considered, but we confess a preference to as many varieties of trees and shrubs as space will allow in the shrubberies and kept grounds; the more and the better they are the greater the interest. The massing system is perfectly correct where space allows one to carry it into full effect.

The opening chapter of the book is devoted to a succinct history of garden making, old and new; after which, in rotation, come chapters dealing with the site and its treatment, fences, gateways, terraces, flower gardens, lawns, walks, drives, the position of greenhouses and fruit houses, &c., together with the erection of fountains, and the treatment of water in streams, pools, and ponds. The subject of planting for landscape effect, also the formal arrangement of trees, with chapters on kitchen garden and orchards, are likewise furnished. Numerous samples of finished garden designs are provided, and quite a host of plans, sections, and sketched details, not omitting the more elaborate illustrations. To the gardener or employer seeking for advice or ideas on the making or altering of their gardens or estates we recommend Mr. Mawson's book. The illustrations upon page 309 and 313, kindly lent by Mr. Mawson, are two of the many with which the work abounds.

* "The Art and Craft of Garden Making," by Thomas H. Mawson, London. Published by B. T. Batsford, 94, High Holborn; and Geo. Newnes, Ltd., Southampton Street, Strand. 1901. Price 21s.

Travelling Glass Houses.

THESE useful inventions have long been turned to profitable account by market growers, but as far as I am aware, as yet they have been but little used in private gardens. I cannot, however, think that this state of affairs will long continue, seeing the many ways in which they may with advantage be used. Perhaps one drawback to their use in private gardens is that a long strip of ground is necessary on which to grow a succession of crops, so that each may receive the protection needed at a certain stage of their growth. Such strips could not often be spared in the kitchen garden proper, but as there is usually an unenclosed quarter connected with many gardens this difficulty should be easily overcome.

All the houses I have yet seen have been wide span-roofed, but I see no reason why others from 12 to 15 feet in width should not be constructed on the same principle. To make the best use of such houses when erected a regular system of cropping must of course be adopted, so that as soon as one crop has been cleared another growing in a division near it has reached that stage in which the protection of glass is beneficial. The following is a good system which answers the purpose admirably. Let us suppose a house is made to travel over two other spaces equal in size to that on which it stands. Its present position we will call No. 1. This can now be filled with October-flowering Chrysanthemums lifted from some other part of the garden. No. 2 should be planted with an early variety of Cabbage Lettuce, and No. 3 with Strawberries.

So soon as the Chrysanthemums have been cut the house is moved on to the quarter planted with Lettuce, and the Chrysanthemum stools should be covered with rough strawy material to protect them from frost. The Chrysanthemums might be retained in this position for a couple of years, or the usual plan followed of growing them in other quarters throughout the summer, and removing them to space No. 1 in late September. When the Lettuce are cleared in spring, the space they occupied should be planted with Tomatoes, which would be over in time to run the house back to the Chrysanthemum quarter. The first year the Strawberries would perhaps not be sufficiently strong to pay for covering, but the following year, as soon as the Lettuce were cleared, if the house is run over the Strawberry quarter, it will protect the blossoms from frost, and insure earlier crops than could be obtained without such protection.

In the meantime Tomatoes could be planted on the Lettuce quarter from the middle to the end of May, and would get established by the time the Strawberries were over and the house at liberty to cover them and bring them on more quickly. If a fourth quarter was added, a successional bed of Strawberries might with advantage be planted on it next year. This would have outdoor culture for a year or two, and would be in prime bearing condition by the time the earliest planted bed needed removal.

I have never heard of travelling houses being utilised for Vine growing, but it seems to me they would be of immense service where early Grapes are grown. I suspect every gardener who cuts ripe Grapes in May or June has often lamented the fact that the house in which they are grown can be turned to so little profitable use during the remainder of the summer. Now why should we not train our Vines to curved trellises fixed in the ground, and as soon as the Grapes are cut, push the houses forward to cover Tomatoes previously planted in readiness, or after the houses been moved, plant them with Cucumbers or Melons? The Vines would be all the better for the exposure, and the houses would certainly be better employed for three months than they usually are at present.

To some perhaps the thought may occur that as early Grapes are generally grown in lean-to structures, there may be some difficulty in building that type of house for "travelling;" but I have in my mind a clear idea of the way in which it could be done, and I doubt not that the firms who make a speciality of building "travelling" houses do not confine their plans entirely to structures of the span-roofed form. There are, I am firmly convinced, great opportunities for the extended use of movable glass houses in both market and private gardens, and perhaps we may live to see them largely employed for hardy fruit culture, as the same house could be used to cover a breadth of Pears, Plums, and Apples during the critical time of flowering, and would then be available for growing other crops during the greater part of the year.—
MIDLANDER.



MAGNOLIA CONSPICUA AT WYNLASS BECK
WINDERMERE. PHOTO BY BRUNSKILL

L.C.C. Distribution of Surplus Plants.—By order of the Parks Committee of the London County Council a distribution of surplus plants in the parks and open spaces under their control will

take place as follows:—Sydenham Wells Park, October 15th; Brookwell, Dulwich, and Deptford Parks, October 16th; Myatt's Fields, October 16th; Ravenscourt and Clissold Parks, October 18th; Royal Victoria Gardens, North Woolwich, October 22nd; Southwark Park, October 23rd; and Waterlow Park, October 24th.

NOTES

NOTICES

Weather in London.—The winter fogs have already been experienced; both on Sunday morning and Monday morning the atmosphere, more especially in certain districts, was thick and damp from fog. Saturday was a delightful day, and, while most of the days have been very mild in the afternoon, the evenings have been clear and chill. Frost might be recorded on any evening in such weather. Unexpectedly, rain fell heavily on Tuesday and Wednesday.

Curator of Washington Botanic Garden in Scotland.—Mr. W. R. Smith of the Botanic Gardens, Washington, is visiting Mr. and Mrs. Carnegie at Skibo Castle, N.B. Mr. Smith will greatly enjoy Skibo, where many of the rarest specimens of trees in and about the park are the gift of Mr. Smith to Mr. Carnegie. The Robert Burns library, now offered for sale by the heirs of Mr. Craibe-Angus of Glasgow, at the price of 15,000 dols., is to be purchased by Mr. Smith by direction of Mr. Carnegie. The library will become the personal property of Mr. Smith during his lifetime, and will afterward go to the Carnegie Library in Pittsburg.

Fellows of the Royal Horticultural Society.—Seven hundred and sixty new Fellows have been elected to the Royal Horticultural Society since the beginning of this year. As each, at the least, pay 1 guinea, the total must swell the general revenue of the society's exchequer to a degree that must especially please the Council, the secretary, and the other officials, and last, but not least, the Fellows themselves. Gardeners would do well to subscribe their guinea, if only for the benefit they would receive by obtaining a free copy of each of the society's journals. We can hand the names and addresses of any reader of our paper who would care to become a Fellow to Mr. Wilks, the secretary of the Royal Horticultural Society.

Is it True?—We can scarcely believe that Mr. Peter Barr, V.M.H., the specialist in Daffodils, and able judge of Irises, should have been hoaxed, as it would seem he has. Last year the American and the British horticultural journals quoted a letter written by Mr. Barr in respect of a new German Iris named "Painted Lady." It was described as possessing colours so wonderful that everyone stood impatient to hear more of this anomaly, or see it. A great number of growers have, indeed, written to Australia for further facts, and here is the sequel, as proved by an Australian letter to an American:—"It's very laughable about the scarlet Iris, as from inquiries made I find this fine specimen written about was doctored by dipping a white Iris in red ink. You are not the only one in the U.S. who has written for the plant. I am sorry I cannot give you more satisfaction."

Sweet Peas in America.—Rev. W. T. Hutchins, the special authority on Sweet Peas in America, and who represented that continent at our Bicentenary Celebration last year, writes despairingly of the failing interest in Sweet Peas in his land. Quite extraneous to this part of the subject, however, Mr. S. B. Dicks, an English enthusiast, instances a case of duplicity among certain varieties. He wrote the following to "The Florists' Exchange":—"About 1896 Cooper, Taber & Co. imported from a thoroughly reliable grower in California some Emily Henderson Sweet Peas. A market grower having proved these to be pure stock, they were sent to growers in two different parts of Europe, many miles distant from each other, to be used as stock seed, an early crop being required. I personally inspected both fields, and found them so perfectly pure and true that I requested each grower to reserve a portion of the crop to be used for stock seed for the following year. There was no other variety growing within miles of these two fields, but to my great surprise, when paying my annual visit of inspection the next year I found in one case from 40 to 50 per cent. of Blanche Ferry and the old purple, and in the other case from 20 to 25 per cent. of the same varieties. A careful examination of the stock seed which had been used revealed the fact that many of the peas were almost black in colour, although the seed originally received from California was of the true dull brown tint. In regard to the soil in which they were grown, one field was a marshy limestone, and the other a strong, heavy loam; the latter produced the fewest rogues.—S. B. Dicks."

Coming Chrysanthemum Shows.—A long list of fixtures is published in our advertisement pages.

Fungus Foray.—On Saturday next, October 5th, the South London Entomological Society has arranged for a "foray" to Oxshott, led by Mr. W. Step and Mr. W. J. Lucas.

Crystal Palace Fruit Show.—The entries for this show close to-day, Thursday, October 3rd. We did not receive the official notice of this until we had published last week. On each day of the show, Fellows, on showing their tickets at the turnstile, will be admitted to the Palace free.

The Potato Crop.—On Monday the work of getting in the Potato crop commenced in earnest in the Fen districts. Labour is scarce and women are receiving 2s. 6d. a day. Many children are employed, and throughout the Fens the schools are closed for two or three weeks at this season of the year in order that the children may help in the fields. Owing to cold nights and fogs there is a good deal of blight, and the price of Potatoes is likely to rise 10s. a ton.

Mr. G. Fennell.—Many friends of Mr. George Fennell, who for the past thirty years has had charge of the gardens and grounds of Fairlawn, Tonbridge, the residence of W. M. Cazalet, Esq., will learn with regret that he has just retired from that important post. Those who have had the pleasure of visiting Fairlawn during the last quarter of a century have been made aware of the many extensive additions and considerable alterations and improvements he initiated and carried through in the most successful manner. Fairlawn is a place of great horticultural and historical interest, and well repays a visit. The good wishes of hundreds of friends will follow Mr. Fennell into his retirement.

Our Fruit Number.—Our next issue will be specially devoted to articles on fruit and fruit culture, with an increased number of illustrations. Besides a selection of Apple and other figures, there will be a central illustration of the illustrious Sir Joseph Paxton, together with a short sketch of his career, which it is hoped will be welcome accepted, the more so in view of the great exhibition of British grown fruit within the Crystal Palace, which building owes its presence and design to the remarkable Paxton, whose first Crystal Palace was erected just fifty years ago. Illustrations of a useful and thoroughly practical nature will not be wanting, so far as space allows, and we trust our efforts may meet with amicable recognition.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighbourhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

Variorum.—Supporters of the "Garden City" scheme and members of the Garden City Association opened their conference in Birmingham last week under the presidency of Mr. Ralph Neville, K.C. The chairman declared that the conditions of life in our large towns were incompatible with a healthy life, and with physical degradation proceeding apace nothing could under existing circumstances prevent the ultimate decadence and destruction of the race. "More air and less alcohol," he suggested, should be the motto of the association. * * A three days' sale of forest trees was held last week at Milton, Stoke-on-Trent, the name of the gentleman who "knocked down" the lots being Mr. John Oaks Ash, a well known local auctioneer. * * The Agricultural Society of the Médoc has awarded the gold medal for the best cultivated vineyards in the claret districts to W. & A. Gilbey for their estate of Château Loudenne. * * This year's Potato crop in Ireland is said to be the best in that country for a quarter of a century. * * The distinction of being the smallest tree belongs to the Greenland Birch. Its height is less than 3 inches, yet it covers a radius of 2 or 3 feet. * * Mr. Bromley, of Botolphclaydon, has in his garden two Apple trees in full blossom—a Ribston Pippin and Blenheim Orange.

Strawberries in October.—On Wednesday morning a basket of second crop white Strawberries of the variety King of the Earlies was received by a West End fruiterer from a grower in the Harrow district. The fruit was of fair size and quality.

"Cassell's Dictionary of Gardening."—Part 5, price 7d. nett, of the above has been issued. Double tuberous Begonia flowers are the subject of the coloured frontispiece.

Currants in Kent on September 19th.—A fine sample of White Currants, perfectly developed and ripe, were picked on Thursday, September 19th, from a bush in the garden of Mr. Frank Sutton, Harrietsham. Such a perfect sample of White Currants is a rarity in Kent so late in the year. At Kennington ripe Cherries of the Bigarreau variety were gathered last week.

Legal Notes : An Orchid Fancier's Bankruptcy.—At the Leeds Bankruptcy Court on September 24th, before the Registrar (Mr. Thomas Marshall), James Horatio Rand, provision merchant and commission agent, of Cliffe Lane, Baildon, appeared for his adjourned public examination. The gross liabilities were returned at £8807 1s. 8d., of which £4932 1s. 8d., was unsecured, while the available assets were put down at £176 12s. 4d., leaving a deficiency of £4755 9s. 4d. The debtor attributed his failure to "depreciation in value of property, money expended thereon for greenhouses and improvements, bank charges, and property being unlet." He stated that he had spent at least £2000 on Orchids and other plants which had sold for £40. He had sent out to continental firms a printed description of his house and grounds at Baildon, which he stated was reprinted from a flower show catalogue. The examination was further adjourned.

Death of Sir Grenville Smyth.—This wealthy landowner, so well known in Somerset, died on Saturday last, at Ashton Court, Long Ashton, his principal residence. The deceased will be missed sorely, although his frequent absence from home and his retiring disposition made him by no means a familiar figure in local society. His tenantry, cottagers, and those employed on the estates held him in great respect. Quiet and unostentatious, he nevertheless took a deep interest in the affairs of those who were in any way associated with him, and that he was not unmindful of the responsibilities of wealth was shown by the ever ungrudging responses he made when occasions presented themselves. A holding of the Smyth estates always elicited many applications from farmers desirous of joining the tenantry. According to the "Bristol Times and Mirror," Sir Grenville has tenanted Thurso Castle, Caithness, for the first time this year. At different times he had rented Erchless Castle, Inverness-shire; Ardrass Castle, Ross-shire, and one year the Duke of Hamilton's domain, Brodick Castle, Isle of Arran. The funeral, as matters now stand, is fixed for Saturday next, at three o'clock, at Long Ashton Church.

Wood Paving in London.—Since our announcement of the state of affairs existing in the Corporation of Westminster, London, in relation to the wood paving of the streets there, on page 288 last week, matters have more fully ripened. The "Morning Post" of yesterday (Wednesday) devoted three columns to a thorough statement of the case; it had also a leader on the subject. We cannot allude further to the matter at the present moment, but we point out to those whom it may concern, where ample information may be obtained. Summarised, the case is that "the Westminster Council invited tenders for the paving of certain thoroughfares in their extensive district. Several firms of unimpeachable repute competed, and were rejected, amongst them being the firm which had contracted at the lowest price. Two contracts were accepted—namely, Mr. Alcott's tender to pave the Strand and other streets with the South American red gum wood, and the tender of the Improved Wood Paving Company to lay down its 8-inch blocks in Piccadilly, Charing Cross, Whitehall, and Broad Sanctuary. In Mr. Alcott's case the allegation is that corruption and favouritism existed; against the Wood Paving Company it is alleged that their contract departed in two important particulars from the specification of the Council, whereas the rest of the competitors were required to comply with it. The next few days are likely to see some important developments, in which the whole question of the management of the London streets will, we trust, be raised. Meanwhile a grave responsibility rests with the Mayor and Corporation of Westminster in face of the charges brought against them. Red gum is a South American wood (?), and the improved wood paving is a Baltic product, whereas the Jarrah (*Eucalyptus marginata*) and Karri (*Eucalyptus versicolor*) blocks are hewn from Australian forests."

"The Gardener's Assistant."—By dwelling too conscientiously on some phases of the latest volume of the above, in our review on page 284 last week, we entirely omitted to mention that volume iv. contains three splendid full page coloured plates, illustrating meritorious new and old varieties of (1) Apples, (2) Pears, and (3) Plums.

Disposal of Fruit Grown in Ravenscourt Park.—In a kindly letter to the Editor, Mr. Gingell states that our correspondent was wrong in surmising that the fruit grown in the orchard at Ravenscourt Park is disposed of by auction. It is given away to public institutions, hospitals, &c., a piece of information which we are most pleased to hear.

National Chrysanthemum Society.—The office of president of this society, vacant by the death, early in the year, of Sir Edwin Saunders, has been accepted, much to the gratification of the committee, by Sir A. K. Rollitt, M.P., who has expressed his willingness to take the chair at the annual dinner of the society to take place at the Holborn Restaurant on Wednesday, November 27th.

Swanley Horticultural College.—From the hon. secretary, Miss E. Sieveking, we receive a few particulars of recent successes scored for the above college by students of it. These show that there is "quality" lying ready for use at this Kent establishment. Besides the award of a silver Knightian medal for a splendid collection of fruit staged at the Royal Horticultural Society's latest meeting, other scholarship prizes have been added to previous lists. A National Scholarship for three years, a great distinction secured by Mr. Wilson, a student; Science Scholarships from the Board of Education, by Miss Draper and Miss Shore. Twenty-four students were recently examined in Bee-keeping, and having passed, are now experts. Mr. Bronghton Carr pronounced this "a record examination."

Damsons at Less than Two Shillings per Cwt.—The poor of the large towns will envy the good fortune of the Salopians in being able to obtain good fruit at trifling cost. We have to fall back on the proverbial "oldest inhabitant" to remember the time when there were so many Damsons in the county as there are this season, and on Wednesday Market Drayton streets were blocked by the lorries and other vehicles which brought the spoils of the orchard into the little town. So it has been in other parts of Shropshire. The market, for an hour, asked 2s. for 30 lbs. of Damsons, but that giddy price did not long prevail, and before the day closed the quantity could be had for sixpence.

Sussex Weather.—The total rainfall at Abbots Leigh, Haywards Heath, for September was 1.78 inch, being 0.99 inch below the average. Total for the nine months 15.90 inches, as against 21.11 inches the average. The heaviest fall was 0.65 inch on the 16th. Rain fell on nine days. The maximum temperature was 75° on the 8th, the minimum 38° on the 16th; mean maximum 65.06°, mean minimum 48.25°; mean temperature 57.65°, which is 0.67° above the average. An inch of rain on the 16th and 17th, followed by dull days and more showers on the 20th and 21st, has fairly moistened the soil, and winter vegetables are much improved. Fruit trees will also have a better chance of making up their fruit buds than last year, for there is now more moisture in the soil than there was at the end of October last year.—R. I.

Meteorological Observations at Chiswick.—Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest	Lowest.					
1901.										
September.										
Sunday .. 22	S.S.E.	deg. 61.6	deg. 57.3	deg. 67.3	deg. 50.2	Ins. —	deg. 58.0	deg. 58.7	deg. 57.9	deg. 41.5
Monday .. 23	S.E.	62.7	60.0	66.0	59.2	—	59.3	58.8	57.9	53.3
Tuesday 24	S.S.E.	60.1	58.6	68.4	58.0	—	58.2	59.0	57.9	41.3
Wed'sday 25	S.E.	59.9	58.2	66.9	50.0	—	59.0	58.8	57.8	43.9
Thursday 26	W.N.W.	57.5	54.3	66.8	47.5	—	58.2	58.8	57.8	40.0
Friday .. 27	W.N.W.	55.1	53.2	67.2	40.7	—	56.7	58.7	57.8	34.8
Saturday 28	S.W.	61.8	58.7	68.9	55.1	—	58.2	58.3	57.8	51.0
MEANS ..		59.8	57.3	66.6	51.5	Total —	58.2	58.7	57.8	43.6

Damp misty mornings and fine days have prevailed during the past week.

Liliums for Pots.

SPEAKING broadly, the chief requirements to successful pot culture in almost all cases, and with almost all species are—1, Sweet, fresh, clean soil; 2, Liberal watering; 3, Plenty of pot room; 4, Good drainage; and 5, Broken sunshine without obscuring light.

Lilium lancifolium.—This estimable species has given us many good forms, all of which very easily adapt themselves to pot culture, and are consequently grown by the thousand, both for supplying the market with cut flowers and for room and conservatory decoration. The forms vary from the purest white of Kraetzeri to deep crimson of Melpomene, and although I do not think the yellow Henryi strictly a form, yet it is so nearly allied as to be cultivated in the same manner, and for this purpose may, I think, be called a yellow lancifolium, giving thus a new colour to this group.

The soil most suited to their culture is good maiden loam mixed with a little leaf mould and a sprinkling of sharp silver sand. The pots should be well crocked to insure perfect drainage, over these a layer of quite decayed manure may be laid, with a piece or two of charcoal. For single bulbs use 7-inch pots, fill with mould up to a third of the depth, place the bulb on this, having shaken a handful of coarse silver sand immediately round it, and fill up until the very points of the scales can just be seen, when no more should be added until the plant requires it—that is after having made surface roots and a sufficient growth of stem to be well out of the pot. Three bulbs may be used for 10-inch or 12-inch pots. Immediately they are so potted stand in a cool frame or similar situation, taking care the sun's rays do not heat the pots, cover deeply with cocoa-nut fibre or similar material, and if the soil was rather dry, and the pots new, give one good watering, and no more until growth is established. If the soil was fairly moist, and the pots older, it will not be necessary to water until the bulbs have well started.

When the young shoots are found to be pushing through their covering, take them out as they require, and stand in some open light place, being partially screened from the hottest of the sun's rays; fill up the pots with a similar compost as used in potting, to which might be added a very little well-decayed manure—from the dairy farmyard preferred—leaving space for watering of course, and increase the water as the plants require it. Weak liquid manure may be added, if carefully done, when the flower buds have appeared, to give the final touch as it were; this last adds greatly to the brilliancy of colour and glossiness of foliage. *L. longiflorum* in several forms also forms a good pot subject; they all enjoy soil of firm texture, and may be made somewhat richer than the above, otherwise the same compost is admirable. When the pots are quite filled with roots *L. longiflorum* may be brought into a greenhouse, or if during cold weather may be forced in a temperature of 70° to 80° if required.

No Lily pays better for liberal treatment than the forms of *longiflorum*. The well known *L. Harrisii* is a variety evolved by selection and careful cultivation in Bermuda as to become distinct, inasmuch as it more easily adapts itself to forcing and pot culture generally, and produces a greater abundance of flowers. For florists it is particularly valuable, flowering at a different time from the type imported from Japan or China. Where effect is required, as, for instance, in a large conservatory, the variety *giganteum* would be the best for the purpose; attaining the height of 5 feet, and clothed to the pot with foliage of great texture and of a rich dark green, their spotless trumpet shaped flowers are, indeed, imposing.

L. auratum.—Good forms of this—probably the noblest of all the family—are, perhaps, the greatest favourites for pot culture. They, however, require a little more careful watching—a few more of those little nameless attentions, which in themselves are next to nothing, but in the aggregate make all the difference between first rate and second rate.

A good system of culture would be very similar to that recommended for *L. lancifolium*, with a few additions, and above all closer touch with the plants. The soil should be composed of three parts fat fibrous loam and two parts sweet fibrous peat, with a handful of decayed leaf mould and good sprinkling of sand. Arrange drainage, charcoal, &c., as recommended for previous species; give plenty of pot room and be very careful in filling up to cover the surface roots; afford plenty of water when in full growth, but avoid most carefully any appearance of stagnation, and never allow the points, the feeding parts, of the roots to be injured by too hot sunshine or drought. When placed outside, after coming out of the frame, carefully stake and secure from wind, and avoid as far as possible their being swamped by storms. When the buds are well developed, bring into the conservatory and avoid as far as possible moving them afterwards. A little weak liquid manure may then be afforded, little and often rather than an overdose to commence. After they have finished

flowering and are no longer ornamental in the conservatory, have them carefully stood out in some out-of-the-way part, where, however, they still can receive moderate quantities of water, which should be diminished as the plant ripens its foliage.

When quite dormant still never allow the soil to become parched, if it does it will be at the expense of next season's flowering. Where it is proposed to grow Lilies in any quantities a space should always be held in reserve for dormant roots stored away in the pots and soil in which they have been grown. When the time comes for starting them again they should be carefully shaken out, keeping intact all the fibrous roots which still remain alive, take out any decayed or injured scales, and dress the space and wound with charcoal dust, or if fungus is observed with sulphur. When imported bulbs are used for the first time after arrival carefully look them over, trim and dress as described, and if large made-up pots are required, say three or four, according to size of bulb, in a 12-inch pot, start them in damp cocoa-nut fibre, placing all of one degree of growth together, care being used not to injure the rootlets, which are then about an inch long. Do not press the soil down too firmly, and fill up as recommended above as the surface roots require it, never allowing these to be exposed to the sun's rays.

The best forms of *L. auratum* are *platyphyllum* Crimson King, *virginale*, *rubro-vittatum*, and *cruentum*. Imported bulbs are very variable, some flowers being composed of mere shreds, whilst others are broad and nearly flat. Some are nearly pure white, whilst others have a very broad rich band in the centre of each segment, or, as in *cruentum* and *rubro-vittatum*, crimson bands and spots.—E. LADHAMS.

(To be concluded.)

Cherries under Glass.

A STRUCTURE devoted to Cherries is not common, but no fruit is more useful in the spring. The house should be light, well ventilated top and bottom, and efficiently heated; no other is suitable for Cherries. A lean-to or three-quarters span, facing south, is most suitable for early forcing to afford ripe fruit in April, and a span-roof with the ends north and south for affording Cherries in May and June. The trees may be trained to a trellis fixed 12 inches from the glass, border inside, and not made all at once. A 4 to 6 feet width of border, according to the size of trees, is sufficient to commence with, draining it with rubble 9 inches deep, and on that a 3-inch thickness of old mortar rubbish.

From 20 to 24 inches depth of soil is ample, allowance being made for setting. Good turfy loam, preferably rather strong, with one-fifth of lime rubbish from an old building, and a sixth of road scrapings, form a suitable compost. The trees may be planted as soon as the leaves fall. Those trained to walls four to six years, and in a fruitful healthy state, also recently lifted so as to bear removal safely and without check, are the most suitable. The border being put together compactly, and the trees firmly planted, following with a good watering, and mulching with a little short stable manure, will give a fair crop the first season. The most suitable varieties are Belle d'Orleans, Early Rivers, Governor Wood, and Black Tartarian. The roof-lights should be taken off, and remain so till the beginning of next year.

Cherries in Pots: Varieties.

Cherries are readily forced in pots, and give a long succession of fruit. The house must be heated for forcing, or it may be a cool one, in each case well ventilated, and as the trees ripen their crops and are cleared of them they may be placed outdoors. The trees should be secured at once, and if they require a shift into larger pots attend to it without delay, disentangling the roots at the sides of the ball, and cutting back any straggling and thick ones. Provide good drainage, and ram the soil firmly. Trees that are in as large pots as desired need only have the drainage rectified and the surface dressed; or the drainage may be cleared away, a few inches from the base removed, the roots shortened back, and fresh soil given as advised for borders, with a fifth of well-decayed manure, removing also the loose surface material, and supplying rich compost.

For forcing in pots, Belle d'Orleans, Early Rivers, Empress Eugénie, Bigarreau de Schreken, May Duke, Black Eagle, Governor Wood, Black Tartarian, Elton, and Mammoth are good. For a cool house, Belle d'Orleans, Early Rivers, Early Red Bigarreau, Empress Eugénie, Bigarreau de Schreken, Governor Wood, May Duke, Black Eagle, Archduke, Nouvelle Royale, Florence, and Late Duke. Those are compact growers, and the following are large growers:—Early Jaboulay, Black Tartarian, Bohemian, Black Bigarreau, Elton, Reine Hortense, Bigarreau, Bigarreau de Mezel, Mammoth, Duchesse de Palluan, Bigarreau Napoleon, Belle Magnifique, and Tradescant's Heart.—HERTS.



PAVED WALK IN THE KITCHEN GARDEN THE GRANGE WYMSBURY

FROM "THE ART AND CRAFT OF GARDEN MAKING."



A Disease Resistive.

Might I ask, through the medium of your columns, if any of your readers have found Messrs. Wood's preparation, Veltha, of any service in the prevention or cure of eelworm or "club?" Being troubled with the former in the roots of Vines, Peach trees, and other things, and with the latter badly in all the Brassica family, I should be glad to hear if it has been found to be as effectual as its inventors claim it to be. It would be interesting to hear also how it has acted with Potato and other fungoid diseases.—R. W.

Indian Corn.

The green ears of the above form an excellent vegetable, which comes in very useful in a season like the present, the heat and dryness of which, so prejudicial to Peas, &c., being just what snits the requirements of the Indian Corn. We have had them in condition for the table since about August 20th from seeds sown in the open ground at the beginning of May, and find them to be much appreciated. The variety we find to be earliest is Ryder's First and Best, the plants being dwarf, and producing ears freely. The time for gathering may be determined by the portion of the inflorescence which projects from the ears turning brown; this takes place when the Corn is full grown and before it ripens. The method of cooking them is to boil whole in salted water for about twenty minutes, in which state they are served up to the table, to be taken up in the fingers, the Corn being extracted with the teeth.—R. W. DEAN, Wainsford, Hants.

The Cult of the Dahlia.

As a regular reader of your paper I should greatly like to see a little less space devoted to Orchids and Chrysanthemums, and a little more notice given to the flower which, in a few years' time, when its existence has become known to the public, will drive everything else into the shade. I refer to the Cactus Dahlia. We are most of us sworn slaves to the fashion, that contemptible institution of small minds and parrot tongues, and the fashion has chosen the Orchid and the Chrysanthemum, apparently because the former is the most hideous monstrosity of the floral world and can only be produced under purely artificial conditions, and the latter because it blooms at a season when there are no other flowers with which to compare it. Still, for those who care to devote their main energies for six months of the year to a plant which finally produces three blooms and is then done for, there is nothing to be said against it. But what then of the Cactus Dahlia, which can be had in continued bloom for a four months' season, producing finer and finer flowers as the year advances until it is cut down by the frost, which often does not come until well into November. If a sheltered situation is chosen very little tying up is required, and if the soil is good, no manure, only plenty of pure water. All that is necessary is the devoting of a little time once a week to the careful thinning of the buds and shoots, and the result will be from 100 to 200 grand blooms, per plant, for the season—July to November.

For richness and variety of colouring, the Dahlia admittedly ranks foremost amongst flowers, and to this has been added in the newer varieties of the last few years the most absolute perfection of form and habit of growth. The plants are subject to no disease that I know of, which is more than can be said for the Rose, Orchid, or Chrysanthemum, and where one really perfect Rose can be cut, there would be at least twenty perfect Cactus Dahlias. The Rose has also to battle with the rigours of the winter, with results that we all know to our cost, whilst the Dahlia tubers are comfortably stowed away safe and sound until the time for replanting or striking cuttings. As evidence of the ignorance of the large majority of the public to the very existence of the Cactus Dahlia, I commend to your notice an article in the "Saturday Review" of September 21st, in which the writer frankly admits that he went to the Royal Aquarium show expecting to be bored by an exhibition consisting mostly of Dahlias of the old "Show" and "Fancy" types, but on entering the building he became aware for the first time of what the Cactus Dahlia of to-day really is, and in consequence he came away enchanted, and amazed at his discovery. He is a specimen of ninety-nine out of every hundred existing flower growers, and I am confident that as soon as a fair proportion of the remaining ninety-eight have made the same discovery the Cactus Dahlia will rise to its proper position of the queen of all flowers, behind which the ridiculous fashion fancies of to-day will take a back seat.—P. W. TULLOCK.

[In the main we agree with Mr. Tullock. We noticed the article in the "Saturday Review." Truly enough, the Cactus Dahlia is at present very popular, and deserves more notice than it at present receives. Our correspondent's hints have not fallen on stony ground.]

Is the Loganberry Worth Growing?

I noticed a letter in one of the Yorkshire papers early in August from a lady who seemed unsuccessful with the above hybrid. She had grown the Loganberry, and has, both this year and last, had the fruits attacked by a maggot. Last year only some of the berries contained a maggot, and it would be interesting to know whether differences of season and of locality have anything to do with this enemy of the new fruit. The fruit makes an excellent jam, with a distinct and agreeable flavour all its own, but as it ripens very irregularly, and will not keep long after being plucked, a considerable number of plants are necessary to give a sufficient quantity at a time for preserves. The Loganberry bears freely, and blackbirds and thrushes leave it severely alone, so far in the history of its short existence.—M. H.

Straying Swarms of Bees.

As an expert under the Worcestershire County Council, I meet with some colonies of bees besides those in the usual skep, or bar-frame hive. In one cottager's apiary of sixteen stocks I found some in butter buckets, others in tea chests, old skeps, and two home-made bar-framed hives of the roughest type, with bars here and there several inches apart, and packed with combs of various widths between. On the top of bars and rough old-clothes-packing, the bees had gone up and built new combs upwards, not suspended, and about a dozen lbs. of beautiful honey. At a farmhouse I tackled a colony of bees which had had undisputed possession at least twenty years, I was informed; taking down brickwork with hammer and chisel as far as the combs extended, 5 feet long and nearly 5 feet wide, which was packed with combs, honey, and bees, some of the combs were 4 feet 6 inches long, and I estimated the weight of combs and honey about 1½ cwt. I used neither veil, gloves, or jacket, and kept the bees under control with smoke and carbolic cloths. I have some of the bees and hope to winter them. I know of five colonies in hollow trees, where I fear they must stay, as the owners object to cutting into the trees to get out the honey.—JAMES HIAM, Astwood Bank, Redditch.

Tea Rose Marie Van Houtte.

No words can be too strong in describing the beauty of this Rose, particularly at this season of the year. Here (Dorsetshire) it grows like a weed, puts forth great shoots erect in growth, thick firm wood, and at the end of each shoot are four fine flowers, while down the stem of each strong shoot are many other blooms. I took a large shoot or spray of this Rose (which contained ten fine blooms and as many buds) to a dinner party, and presented it to the hostess.

The combination of colours in this Rose is the most delightful that can be imagined—pale primrose or lemon-edged, and shaded with peach. At a small exhibition I showed a stand of six Roses (the regulation number), and a more beautiful one I never staged. The six contained magnificent specimens of three splendid varieties of Teas: Souvenir d'Elise, Catherine Mermet, and Marie Van Houtte. These created quite a *furor*. I was asked by many, and entreated by some strangers, to sell them a plant, and to give them buds of Marie Van Houtte. My reply was, I cannot buy enough of it.

Catherine Mermet is very beautiful here in the autumn, more so, I think, than in the summer. The Teas scarcely recover from the spring frosts in time for the summer shows, but by the autumn have made fresh bloom-bearing wood. They then give me most charming blooms, and are most valuable for the late shows.—W. S.

Why not Hops?

When visiting town a few weeks ago, among other places of interest. I inspected the parks, my object being to obtain a few up-to-date ideas in respect to bedding. Of course one cannot help doing so when such as Hyde Park, St. James', and Battersea are visited. That they fully maintain their reputation is amply testified to by your genial correspondent, "Wandering Willie," in last week's issue. A question came to me while strolling through Battersea Park with a typical cockney, anxious to show the "yokel" the beauties of his own park, why the cockney always takes back to town, if he can procure them when visiting the country, a bunch of Hops? I have often wondered why; now I can understand. It is because among all the beautiful plants used to embellish his park there are no Hops; but perhaps the authorities are afraid he would be after them in order to brew his own "four arf!" Anyhow, he does not mutilate the Castor Oil plants I saw used with such good effect, and as there are several suitable positions in which the Hop (*Humulus lupulus*) and its golden and silver variegated varieties could be used with effect in the sub-tropical gardens, perhaps in due course he will get his free Hops to admire, if not to gather.—GEO. HAGON.

[Our correspondent should have visited Regent's Park and Victoria Park. In each of these places the Hop is used extensively and with splendid effect. No doubt other superintendents will ultimately employ this handsome climber.]

Gadding and Gathering.

"HERE AWA', THERE AWA'."

Hampton Court Flower Bedding.

OPINION, so far as I have been able to glean, gives the note for excellence in its bedding effects this year to the arrangements at Hampton Court, that hallowed pile, frequented much by Londoners living westwards. Even well-trained gardenor-critics forget to grumble when they view such beds as that filled with snow white Japanese Anemones and carpeted beneath with deep blue Violas. Rapture, or quiet delight, let us say (for it is an unpardonable and uncement to state that a gardener ever goes into raptures over a neighbour's efforts!), rises within us when such a pleasing contrast presents itself. There are quite a number of rectangular beds at Hampton Court, and of these a few are filled with elegant and exceedingly light foliage plants, usually rising above a flat surface presentment of floral brilliance. Thus might be noted a bed whose whole centre displays one glowing sheet of unbroken, deep-scarlet-hued tuberous Begonia flowers, while here and there, with a few square feet of space between, uprise the narrow and somewhat recurving blades of *Eulalia japonica gracillima*. For the better furnishing of the bed there are bushy little plants of *Fuchsia gracilis variegata*, the whole being gaily edged with the compact-growing, white flowered *Alyssum maritima*. A round bed was similarly filled. A dark crimson tuberous Begonia, much resembling the excellent *La Fayette*, was employed, and for "dot" plants we noted *Centaurea candidissima*, and tidy plants of *Dracæna indivisa*, the edge was formed of a broad strip of mossy Saxifrage.

Colour contrasts had evidently been seriously studied by Mr. J. A. Gardiner, who superintends the gardens at this famous centre. He has used *Pentstemon (Chelone) barbatus* above a grounding of yellow Violas with splendid results. A simple bed of tall Iresines and the silvery-leaved *Centaurea candidissima* furnish yet another charming production. Of course there are larger and choicer beds, containing a long list even, of select stove plants, such as many gardeners in the North can scarcely boast of, even under glass. These fine-foliaged exotics are grouped in sheltered, sunny beds, and receive the attention and consideration which they at all times demand. I mentioned Begonia *La Fayette* a few lines higher. This beautiful variety is to be seen in one of the beds, and amongst it are golden *Celosias* of the pyramidal type, *Fuchsia gracilis variegata*, *Abutilon Szovitzii*, *Miscanthus zebrinus*, and a broad band of *Abutilon megapotanicum* around the edge. The latter plant is a greenhouse climber, but when pegged-down it forms a very suitable trailer. Lantanas are to be seen as large specimen bush plants grown in the same style as one usually finds *Plumbago capensis* when used in beds. Though these notes are not by any means adequate to do justice to the great variety of arrangements that have been produced, at the same time I have noted the finest combinations, and have tried to describe only the more novel of them. Let my friends who have no time to sit down quietly to think out colour contrasts and harmonies in forms be so good as to plan their beds somewhat after the style of those at Hampton Court, or such as have been, and will be, described from notes taken in metropolitan parks, and I am quite certain they will be gratified at the fine effects. It must not be overlooked, of course, that a great deal of constant care is expended by all the superintendents and their men in the up-keep of bedding designs in the parks of London.

"The Innocents Abroad."

Poor Mr. Darwin! honoured abroad, unknown in his native town.

It happened at the time of the Shrewsbury Show. I had arrived in this cake-famed township on the Tuesday afternoon; the show was to be held next day. The groups and general arrangement of exhibits was proceeding within the tents, but there was no work at that time of day for the journalist, so forth I sallied on an exploring quest, but presently struck upon a friend and fellow scribe, who was no other than Mr. William Gardiner, from Birmingham, a smoky city. Mr. G. is just the man to catch hold of when you go exploring. He has the happiest knack of questioning people who ought to know what he asks, but don't, of anyone I ever went in partnership with. As I say, then, we both set out to see the "sights" of Shrewsbury. The Quarry grounds are always interesting, the more so to those who know what this part was like a dozen years ago, and have watched the steady progress towards a higher respectability which they have been assuming under the generous expenditure of the committee of the Shropshire Horticultural Society. And so our track wended up the left bank of the River Severn, which here is a mere shallow stream, so narrow that any lad of eight or nine years of age could pitch a stone across, upward we went to the Welsh bridge.

It had been decided that we should go and pay our respects to the name of Charles Darwin by visiting the home of his birth at The Mount, near by. We had heard it was close at hand, but woe for the education of Shrewsbury's general public, no one knew where The Mount was, nor had many of them any knowledge of the fact that the greatest of modern naturalists had once been a citizen of their borough. Truth to tell, the workpeople even within a yard or two (as we eventually discovered) of Darwin's childhood home, seemed never to have heard of such a name. My friend lost no opportunity for asking

questions. Having spied an old man sitting in the open doorway of his house facing the street, the inquisitor approached, and bending politely forward he whispered in the septuagenarian's ear: "Excuse me, please, but can you tell me where Charles Darwin used to live?" It was said as though he believed that the great man never lived here at all; so barren had been the results of much questioning prior to this. "Charles Darwin?" echoed our veteran acquaintance in an interrogative tone, then he slowly shook his head. But taking his response as a lead, friend G. added, "Yes, Charles Darwin you know, the naturalist, did you ever hear of him?" "I've heard of Mr. Darwin," — and then he stopped short as if uncertain whether he had better say more. "Then, where did he stay? was it near here?" we next inquired, but this important item was a piece of knowledge the old man did not possess, and he told us so. On we went, however, we trusted that The Mount would presently come into view, but still the loquacious Gardiner continued with his fruitless queries and suggestions, that met with nothing but apparent mild astonishment from the questioned many.

It was not till my active companion had boldly tapped at the door of a pretty suburban cottage, and had fully explained his purpose and errand to the intelligent residents, that we at last—at long last—received full and definite information and instructions. Presently we came to the gates of "The Mount," and, to make certain, a final query was expended on a tradesman who just had emerged from the place. "This is Charles Darwin's old home?" were the words addressed by the man from Birmingham. "No," said the tradesman, "Mr. L— lives here," as on he trudged; and all I heard from Gardiner, as he peered after the fellow, were the words, "Well! well!" The coachman at The Mount was kind enough to appear at that moment, and he no doubt concluded from experience that we were two pilgrims, and our plight was bad. He took us in hand. After that we had no further difficulty. The coachman knew something of the trees about the place, and pointed out those that Mr. Darwin had planted. We each secured leaves and twigs of an Oak (*Quercus pedunculata*), a Mulberry, and a Fig tree that had grown up since Mr. Darwin placed them there. The house itself is a plain two or three storey building, I could not exactly say which, and is at the present time nearly all covered with climbers. There is a terrace on one side, taking one down to the fruit and flower garden; the stables are at the back; and a fair-sized lawn with trees occupies what I may call the west, or front side. We thoroughly enjoyed our brief and interesting visit; we could not roam about, seeing the house is occupied. But not that day, nor for many days yet to come, will Mr. Gardiner or "Wandering Willie" forget the occasion on which we went in search of the birthplace of the great, dead Darwin. —WANDERING WILLIE.

Royal Horticultural Society.

Scientific Committee, Sept. 22nd.

PRESENT: Dr. M. T. Masters (in the chair), Messrs. Houston, Chapman, Odell, Saunders, Worsley, and Douglas, Dr. M. C. Cooke, Prof. A. H. Church, Rev. W. Wilks, and Rev. G. Henslow, Hon. Sec.; visitors, Mr. Crawshaw and Mr. Pockett from Australia.

Maize with twin embryos.—Mr. Houston showed plants resulting from two embryos growing from one grain. A similar phenomenon was not uncommon in the Mistletoe, *Acorus*, &c.

Lily of the Valley diseased.—Mr. Odell brought samples of the foliage, which was quite brown. It was referred to Dr. Cooke for examination and report.

Galls on Oak leaf.—Mr. Saunders showed an Oak leaf having four galls. "These are formed by grubs from eggs laid by *Spathogaster Taschenbergi*, which would produce a parthenogenetic generation of gall flies, known as *Dryophanta scutellaris*, in January or February. These would lay their eggs in the buds of the Oak, and small, somewhat conical galls would be found. From these the sexual generation, *Spathogaster Taschenbergi*, would emerge in July. These galls are common, but are usually found singly on the leaves."

Cattleya Gaskelliana.—Mr. Crawshaw exhibited a spray of three flowers, in all of which two sepals had yellow streaks, thus slightly simulating the colouring of the labellum.

Miltonia spectabilis.—He also showed a small imported plant of this genus which had never been potted for eighteen months, but had sent out a flower from the terminal shoot.

Spots on Orchid leaves.—Mr. Crawshaw read several communications from Mr. Bidgood on this subject; he has traced the spots to a fungus, but as his researches are not completed, a further communication is looked for. The fungus appears to be allied to a *Gloeosporium*.

Schinus molle with fungus.—Dr. Bonavia sent leaves attacked by *Fumago*. Mr. Pockett said it was frequently grown in Australia, and that it likes much warmth. In cold districts it often gets black.

Hybrid Tomatoes.—Mr. Worsley showed some very fine specimens of Tomatoes, the result of crossing the Grape Tomato with a red garden form. The hybrid was remarkable for the number of fruits borne by it, some twenty-five being on one branch; on another were two closely arranged rows of fruit. Another hybrid was between an egg-shaped

Tomato and the Grape as male parent; the fruit were not large, but well shapen.

Tropæolum hybrid.—He also showed flowers of *T. Lobbianum* × *majus*, which were intermediate in character.

Agapanthus umbellatus.—Mr. Worsley also showed a flower of this plant with ten leaves to the perianth and ten stamens, from symmetrical increase.

Watsonia Ardernei.—Dr. Masters showed leaves of this plant, which are remarkable for being quite incapable of bearing the least fumigation without injury.

Beech-tree bug.—Mr. Burbidge sent a sample of this well-known pest, *Cryptococcus fagi*, exceedingly common this year. He wrote as follows:—"The specimen came from Croydon, where trees 12 feet in circumference have perished. We have it here on the stem of a Weeping Beech, in the College garden. This stem is of the common Beech, and the weeping variety is grafted upon it, about 5 feet above ground. The *Cryptococcus* only infests the bark of the stock up as high as the graft-line, and does not spread or live on the scion or weeping variety above the graft-line." Mr. Burbidge refers to an opinion that this insect never attacks the purple Beech; an undoubted error, as a large tree of this kind died at Ealing in 1898 from it in the secretary's garden.

Plane-tree leaf diseased.—Mr. Burbidge also sent leaves of this tree attacked by *Fumago*. Several other plants, he observes, are similarly diseased by it.

Proliferous Barley.—He also sent specimens of Barley with extra short ears at the base, imitating the so-called "Egyptian Wheat." They appeared among a crop of Chevalier. He raised the question whether it could have resulted from a cross with the six-rowed Barley; but without experiment this could not be decided. Probabilities would seem, however, to be adverse to this view, as no such crossing would apply to proliferous Wheat and other cereals, or to Plantains in which it is of common occurrence.

Prunus sp. diseased.—Dr. M. C. Cooke reported upon specimens sent to the last meeting by Mr. Veitch: "Plum and Cherry and some other orchard trees suffer from the attacks of what are, apparently, wound parasites. These are in the form of a white mycelium, which grows between the bark and wood, and ultimately kills the tree. This is presumed to be the mycelium of some Agaric, probably growing in the vicinity of the tree, first attacking the root and then proceeding upwards beneath the bark. From the mycelium alone it is impossible to determine the species, but, in such cases, it should be noted whether any Agarics are growing in the neighbourhood of the diseased tree, such, for instance, as *Collybia fusipes*. Berkeley, in the pages of the 'Gardeners' Chronicle,' often directed attention to these 'root fungi,' and commented upon their injurious influence. It may be true that they are originally saprophytes, or the mycelium of saprophytes, but they may become parasitic under certain conditions. We contended this some years since in connection with Conifers in the neighbourhood of Edinburgh, in a case brought for trial in the High Court, but an opposing witness declared the mycelium to be only a saprophyte, and unable to cause an injury. Subsequent investigations in Germany and elsewhere have confirmed our opinion."

Helianthus hybrid.—Mr. Buffham sent flowers of a supposed hybrid between the perennial and annual species of this genus. He observes: "The seed-bearing parent has an annual variety (this I have no doubt about), and therefore am able to send a flower of it; but I send also the *Harpalum* and *H. multiflorus*, together with blossoms of the two seedlings, one of which grew to a height of 7, the other to that of 4 feet. For years I have been crossing varieties of the annual Sunflower. I then began to cross the annual with any of the perennial species, and I have no doubt from the results about some of them being true crosses; the seed parent being the annual. The offspring never stood the winter, so I was unable to perpetuate them. Two years ago I fertilised the annual with *Harpalum*, and possibly with *H. multiflorus* (that point I am not quite certain about). I sowed the seed, and the result was three plants, two which grew about 7 feet high, one about 4 feet. All flowered, but they are not likely to ripen seed. I dug up one plant, and potted it when in full bloom, placing it in a cold greenhouse to ripen seed, but it did not do so, but it lived and is still in the same pot. It is different in foliage and growth from any other I possess. The other two plants I left in the open ground; one a Sunflower, has come up, and I enclose a blossom. It is about 7 feet high, growing very erect. It may be one of the three, but I cannot feel certain." With regard to the differences between *Harpalum* and *Helianthus*; Bentham and Hooker describe the former as having two paleaceous awns dilated at the base, and sometimes cleft, but without any intermediate smaller scales noticed by Desfontaine. In the flower of *Harpalum* sent by Mr. Buffham there were the two opposite lateral, and often cleft, very elongated scales; but these were connected with numerous shorter and pointed scales, all being coherent into a caducous ring. The receptacular scales terminate in a blunt end, which is coloured green. *Helianthus multiflorus* differs from *Harpalum* in having no intermediate scales. In this it agrees with the *H. annuus*, var. sent by Mr. Buffham, while the receptacular scales have acute points, also green. In *Helianthus annuus* the receptacular scales are markedly different, being excessively elongated into awn-like terminations of a dark purple colour. With regard to the hybrids, they both agree in having lanceolate sub-scabrid leaves, similar to

those of *Harpalum*. The florets have the two longer scales, with a few short ones intervening, but not coherent. The receptacular scales terminate in acute (not acuminate) points, and are thus intermediate between *Harpalum* and *H. multiflorus*. Comparing these supposed hybrids with the hybrid "Moon"—i.e., *Harpalum* (Miss Mellish) × *Helianthus multiflorus*, they entirely agreed with it, as also with a hybrid between *Harpalum* and *H. mult.* from a friend. If, therefore, Mr. Buffham's be a cross between the annual and perennial varieties, then the latter is so strongly prepotent or "dominant" that no trace of its parentage is present.

Scented Flowers and Leaves.

Stephanotis floribunda when planted out in a well-drained border and trained thinly, close to the glass, where it will obtain all the sunlight possible in our short and erratic summers, will repay by a wealth of sweet odours. In planting, let fibry loam and peat in equal parts be used, removing all the fine particles of soil, adding plenty of silver sand; 6 or 9 inches of brickbats for drainage is not too much, as the *Stephanotis* dislikes stagnant moisture at any time. In winter very little water will be required, and a lower temperature is beneficial. Annual pruning to keep the plant within bounds, and to avoid having lengths of naked stems, is needed after the first crop of flowers in early summer. Remove as much as desirable of the growth that has flowered, shortening to an inch or so from where it sprung. This will give room for young growth to take its place, which will become ripened ready to produce flowers the following year. This treatment allows of two crops of flowers annually.

Eucharis amazonica, when well grown (and this appears to be the exception), is a desirable plant, as the flowers last splendidly in a cut state; it is well to grow it in an ordinary stove throughout the year, never allowing it at any time to become dry. Afford liquid manure or soot water when the pots are full of roots. It thrives best in a shady position a long way from the glass. Large pots are necessary when repotting, as this obviates the too frequent disturbance of the roots, which is a check to the plant.

Repotting is not necessary until the pots become crowded with bulbs or the fibry particles of the soil are exhausted. But in this the opposite extreme must be guarded against of allowing the plants to occupy the same pots until the soil is really nothing but clay and sand, as when the fibre is exhausted, the humus, the main constituent of a fertile soil, is gone, and no artificial manure can make good its place. Fibry loam, from which all the fine soil has been shaken, with nodules of sandstone to insure its porosity, is the fittest. Employ six bulbs to a 10-inch pot, placing these 2 inches below the surface, as the new bulbs have always a tendency to grow upwards. I believe that hard water impregnated with lime is detrimental to the well-being of the *Eucharis*, so that rain water should be used if possible.

Pancratium fragrans, unlike the *Eucharis*, requires annual potting in early spring, carefully removing the old soil from the roots. Allow a single bulb to a pot, which should not exceed the diameter of the bulb by more than 1½ inch. Nothing is gained by overpotting. Feeding is of great benefit. The *Pancratium* lasts well as a room plant; it may be grown in different sized pots, from those of 4½ inches in diameter to 9 or 10-inch pots containing several bulbs. When the first three or four flowers are opened on the umbel remove the plant to a cooler and drier atmosphere, or into the sitting-room, when it will last in beauty a fortnight at least, and the unexpanded flowers will duly open; whereas, if left in a hot moist house, its beauty is very transient. During winter the *Pancratium* should be kept rather dry, but not sufficiently so as to cause a single leaf to turn yellow or decay. During summer grow in a stove in a shady place and water freely.

Hymenocallis littoralis requires almost identical treatment with the *Pancratiums*, but during summer very free supplies of water, as nearly all the *Hymenocallis* are found in swamps. *Nerium splendens* fl.-pl. (Oleander) is rarely grown in batches, but its delicately scented, flesh-coloured pink flowers are always admired. It is easily struck from half-ripened cuttings, taken off when well consolidated during late summer. If old plants are retained they are inclined to become leggy; the only remedy appears to be to cut back the plants hard after flowering each year. These will not flower the following year, as in the successful flowering of this plant a good annual growth, well ripened by exposure to sun and air, is absolutely necessary. During winter it may be kept in a greenhouse temperature, but as soon as the turn of the year occurs in January, remove to a stove or intermediate temperature.

All through the growing and flowering period give plenty of water; in fact, this is a potential point in its culture, as in its native habitat it is found growing on the banks of lakes and watercourses.
—F. STREET.



Stripping Ivy from a Church.—A correspondent to a morning paper justly states that “hundreds of artists and lovers of the antique and picturesque will be surprised and shocked to learn that the new rector of Winchelsea purposes stripping the quaint old church of the magnificent Ivy which is one of its chief glories. Perhaps a timely protest from all who love the ancient cinque port may yet avail to prevent what seems an act of wanton vandalism.”

Young Pines.—All young stock should now be arranged so as to obtain the fullest benefit of light and air. As the sun diminishes a corresponding diminution of the temperature must take place at night, ventilating at 75°, closing at that, and gradually lowering the artificial heat to the winter standard of 65° in the daytime, and 55° to 60° at night. Ventilate freely on all favorable occasions, paying particular attention to watering. Examine the plants about once a week, and whenever one needs water give it copiously at about the same temperature as the bed. —PRACTICE.

Zephyranthes Atamasco.—This pretty bulbous plant is at present flowering freely at Kew, both planted out in a cold frame and in pots indoors. Under the former treatment it seems to succeed best, the leaves being more vigorous, and the flowers much finer. It is a native of Virginia and Carolina, where it is said to grow plentifully in the woods and fields. Under suitable conditions the leaves range from 1 foot to 1½ foot in length, and are narrow and Rush-like. The flowers are borne singly on sturdy scapes, from 9 inches to a foot in length; they are white in colour, with a large green eye, and are occasionally suffused with pink on the outer side. Fine flowers exceed 3 inches in diameter, though often they are found nearly an inch smaller. When grown out of doors it should be given a dry warm soil, and if possible be planted at the foot of a wall. When once established it increases rapidly, and the clumps require dividing occasionally. It is an old plant in English gardens, and is said to have been in cultivation at Kew as long ago as 1680.—W. D.

Lilliums in Japan.—It has been claimed that *L. auratum* is a cross between *longiflorum* and *Henryi*. Mr. J. K. L. M. Farquhar of Boston, who has travelled in Japan, does not accept this idea, and, speaking before the Society of American Florists, said that the claim was made by those who had never been in Japan. *L. Henryi* was discovered in 1888, and two years ago only 306 bulbs of it were to be found in Japan. *L. auratum* was abundant and widely distributed until the supply was diminished by exportations. *L. longiflorum* is also abundant, *L. auratum* he considers a species. *Lilium lancifolium* is cultivated in large quantities, but *L. auratum* is native and is collected, and the supply is being exhausted. That *L. auratum* is collected Mr. Farquhar thinks is well proven by the fact that no two consignments have the same colour of dirt on the bulbs. These Lilies, he says, are found in pockets in the mountains, at a depth of 18 inches below the surface. The prospect is that we shall not get this Lily much longer from Japan, and the price will become prohibitory.

Strawberries in Pots.—Where autumn and winter fruiting plants are grown they must without further delay be placed under glass and on shelves, so that they may enjoy a free circulation of air, ventilating so as to expel damp, as the fertilisation of the flowers is not satisfactorily effected in a moist atmosphere. Plants swelling and ripening their fruit in frames should have moderate ventilation, and though Strawberries will ripen at this season in cold frames, they swell better and the fruit is improved in a house where there is a moderate degree of heat, 50° to 55° as a minimum, 70° to 75° as a maximum, by artificial means, in which they have air on all favourable occasions. Plants for next year's fruiting are late, owing to the droughty weather, the crowns not being so well matured nor so strong as desirable. Those intended for early forcing should be placed on a base impervious to worms in frames or cold pits, exposing them fully to every gleam of sun, employing the lights only to ward off heavy rains, and at night when frost prevails. Keep the remainder of the plants in a sunny position, as they will require every ray of light and sun's warmth to enable them to mature the crowns properly.—G. A.

Sterility of Hybrids.—Scientific men are fond of throwing it up to practical people that they are behind the times; but devotees of science are often among the crowd that live in glass houses and yet throw stones. Horticulturists have long ago learned that hybrids are as fertile as their parents; and Orchids, gesneriaceous plants, and many other classes furnish abundant evidence. But that hybrids are sterile, or generally sterile, is still a doctrine on which many pretty “theories” are founded by leaders in science.

Early Fruiting Pines.—Queens are best for the purpose, but there is not always a certainty of their doing so unless they are given a period of comparative rest after making a good growth. Plants intended for starting at the new year should be kept in a temperature of about 65° in the daytime by artificial means, 60° at night, ventilating at 70°, closing at that, and allowing the bottom heat to fall to 70° to 75°. Water the plants only when necessary, but do not allow them to become so dry as to cause the foliage to become limp.—A.

Jottings on Pines.—Plants that are showing fruit will be valuable when fruit is scarce and dear. Afford such plants the best positions in the fruiting department. Maintain a temperature of 70° at night, 75° artificially by day, up to 85° to 90° with sun, closing at 85°, sprinkling the paths when their surfaces become dry, and occasionally the plants on fine afternoons. Keep the bottom heat steady at 85° to 90°. Examine the plants once a week for watering, and if any require it afford a supply of clear liquid manure at about the same temperature as that of the beds. Care must be taken not to overwater the fruiters, as that has a tendency to cause the fruit when cut to be black at the centre.—P.

Tree Carnation E. Crocker.—We take it as a duty to bring to the notice of our readers varieties of Carnations whose merits we judge to be such that no one disparage. The bloom which our artist has portrayed in this instance was from a plant staged in the Drill Hall on the occasion of the Royal Horticultural Society's meeting within that building on Tuesday, September 10th. The Floral Committee at that meeting affixed an award of merit card to this variety, which was staged by Mr. H. J. Jones of Ryecroft Nursery, Lewisham, S.E. The variety originated, we believe, on the Continent, from whence Mr. Jones procured it. The blooms are very deep pink in colour, strongly resembling the American wonder—namely, Carnation Mrs. T. W. Lawson. The flowers have the advantage of long stalks; are delightfully odorous, and possess a non-splitting calyx.

New Dahlias.—First-class certificates were awarded at the Royal Horticultural Society's show in the Drill Hall on September 24th to the following Dahlias:—Show Dahlia Standard, from Mr. G. St. Pierre Harris. Pompon Montagne Wootten, sent by Mr. C. Turner. Singles: Madge, from Messrs. Cheal & Sons; Maid of Athens, from Mr. F. W. Seale; and Sylvia, from Mr. E. Mawley. Also the following Cactus varieties:—Goldfinch, Lilac, Florence, Aunt Chloe, all from Mr. H. Stredwick; Mrs. Hobart and Mrs. C. Mortimer, from Messrs. Cheal and Sons; Clio, from Messrs. J. Burrell & Co.; Spotless Queen, from Mr. J. T. West; and Mrs. Clarke, Clarence Webb, Columbia, Gabriel, Ophir, and Ringdove, all from Messrs. Keynes, Williams & Co.

Three Showy Hæmanthus.—In the Cape house at Kew one of the most showy groups is made up of different species of *Hæmanthus*, the bright coloured flowers of which are very effective. The most conspicuous plants are *Clarkei*, *coccineus* var. *coarctatus*, and *tigrinus*. The first named is a garden hybrid between *H. albiflos*, a white flowered plant, and the bright red *coccineus*. The inflorescence resembles *coccineus* in colour, and the whole plant suggests that species as predominating over the other. The scape grows 6 to 9 inches in height, and the flower head is about 3 inches across. *H. coccineus* var. *coarctatus* differs by having flowers of a different shade of colour, and by the flower scapes being green with a few dark red dots. *H. tigrinus* is a S. African species that has been in cultivation in England since 1730, and is said to have been cultivated by the Dutch for nearly a century before that. Like the other plants mentioned, it is deciduous, but differs slightly from both in flowers and leaves. In this case the scape is deep red, and the flowers darker in colour than those of the previously named. As the flowers are borne just in advance of the leaves appearing, and the growing season is midwinter, it is necessary to select as light a place as possible for them, and a minimum temperature of 45° should be given. When the leaves commence to turn yellow water should be withheld and a rest of several months duration be given during summer.—W. D.

The Gladiolus.

GLADIOLUS bulbs have a very ugly habit of rotting away, and I believe this is more the case in some soils than in others. I have never seen any good explanation of the reason of this decay, and it is to this, I think, we are to attribute the diminishing zeal of those who venture on their cultivation. Like the Potato disease, no one seems to be able to account for it or to suggest a preventive. "Why do you not," I once said to a well-known horticulturist who was looking at some beautiful Gladiolus flowers, "Why do you not attempt their cultivation, and show us what you can do?" "Well," was his mournful reply, "I have spent £50 on them first and last, and I am sure I have not half a dozen bulbs left." I would say then, Muster courage, do your best, and success will be your reward. The list of varieties that follows each cost from 4d. to 6d., and can be recommended:—

Addison, large, distinct flower, dark amaranth, with a white stripe; Africaine, chocolate brown in colour, with scarlet flushes and white blotch; Amalthee, an early variety, pure white, with large violet red blotch; Amitié, large, distinct, and very good, pale creamy rose shaded with straw and lightly flaked purple; Atlas, a beautiful pale porcelain flower with very long spike, slightly tinted with violet.

Baroness Burdett Coutts, a large magnificent flower and spike, lilac, tinted with rose and purple; Bicolor, an early distinct flower, the top petals bright salmon rose, the lower divisions white edged with rose; Canélon, a beautiful compact spike, slaty white in colour, striped with white, with a pale orange blotch; Carnation, pale flush colour, suffused and tinted with carmine, fine; Cervantes, bright rose tinted with carmine, white stripes and orange tinted lower petals; Conquérant, dark purplish carmine flower with clear white blotch and bands, a beautiful spike; Crépuscule, pale porcelain flower tinted with lilac, large and fine; Dr. Bailey, bright scarlet, blotched carmine on white ground, a very fine flower; Enchanteresse, an extra large fine shaped flower, pale rosy white, lightly striped violet; Feu Follet, a pale yellow, richly suffused and striped carmine; Flamboyant, large, fine, bright scarlet crimson flower; Grande Rouge, scarlet crimson with small violet blotch, a grand flower and spike, one of the very best.

Hespéride, a beautiful flower with pale salmon colour, ground flaked and striped red; Horace Vernet, purple red, blotched and striped white; La Perle, lilac blotched with violet; Le Vésuve, fiery red, a fine late variety; Mascarille, small flowers, but very novel in colour, which is salmon rose, with large sulphur yellow blotches running through the petals; Meyerbeer, bright vermilion, with amaranth blotch; Mont Etna, velvety scarlet, blotched white, a fine flower and spike; Néréide, a fine compact spike, pale rose in colour, with small violet blotches; Orphée, cherry rose, purple blotch, a fine spike of medium-sized flowers; Pactole, yellow, blotched and striped rose; Pollux, carmine flower, flushed brown on the edges, with white blotch, a fine flower; Pyramide, large flowers of excellent colour, of a clear delicate orange rose, shading to amber in the centre; Rayon d'Or, yellow, with red stripes and purple blotch, a very distinct, good flower; Rossini, a fine spike, dark purplish red, blotched and striped with white; Shakespeare, a very early variety, white, with large rosy blotch; Thérèse de Vilmorin, a medium-sized distinct flower, lemon white; Tour du Monde, dark cherry shaded violet flower, with white blotches, long spike.

I would advise anyone wishing to commence the growth of this beautiful autumn bloomer to begin with this collection, and to add some of the best hybridised seedlings. There is one point which at

this season of the year requires attention, and that is the preparation of the beds for the next year's planting. Well decayed manure should be used; but where the soil is light and the climate dry, a good stout yellow loam should be chosen. Where the soil is heavy and the climate moister, the soil should be lightened by the addition of some burnt earth, which should be incorporated with the soil of the garden, and frequently turned over during the winter months and left in a rough state, that it may receive the benefit of the frost.—D., Deal.

Sutton Coldfield Gardeners' Outing.

THE annual excursion of the members of this society took place on the 27th of August, when a party of about forty in number availed

themselves of visiting respectively "Edelweiss," Mr. Walter B. Child's hardy herbaceous and Alpine plant nursery at Accock's Green, near Birmingham, and the gardens of Mrs. Richard Cadbury, Uffculme, and the contiguous gardens of the Right Hon. Joseph Chamberlain, Highbury, Moor Green, near King's Heath. Arriving in breaks from Sutton Coldfield about eleven o'clock, the party was at once conducted by Mr. Child over his interesting and well stocked nursery, and where there was such a richness of resource it would be almost invidious to specialise for particular mention, unless it be the beautiful collections of perennial Lobelias and Phloxes standing out in conspicuous array; noticeable, too, was the new Cactus Dahlia named W. B. Child; it is a large flower, with substantial well incurved petals of a richly shaded dull hue, similar to Night, but more brilliant, with also a good habit, and evidently it "has come to stay." After the party had been photographed, recourse was made to the village Liberal Club, where an excellent luncheon was provided by the curator and his wife, and served by a posse of volunteer lady waitresses, and whose ministrations were much appreciated by the visitors.

After doing justice to the ample refectory the breaks were again requisitioned *en route* for King's Heath. "Uffculme" was first reached, and the visitors were met by Mr. G. Menzies with a hearty welcome at his residence, the lodge at the entrance to the grounds. The visitors were much impressed by the appearance of the handsome and commodious mansion overlooking the extensive and picturesque grounds below and around. A notable floral feature, situate on the lower portion of the extensive lawn in front of the mansion, were three large beds of Roses, containing respectively luxuriant dwarf Roses of La France, Souvenir de la Malmaison, and Général Jacqueminot. The estate was purchased some eleven years ago by the late Mr. Cadbury, who at once commenced to

build the residence and form the pleasure grounds, extensive fruit and vegetable gardens, erection of a conservatory, fruit and plant houses, further details of which, with considerable other matter, may probably appear in the pages of the *Journal of Horticulture* at some future date. Suffice it to say that the numerous, heavily cropped with fine fruit, well trained Apple and Pear trees, either in bush, pyramidal, or espalier fashion, notably grand crops of Lord Suffield and Stirling Castle Apples, and more especially the former variety trained espalierwise on horizontal wires, were objects of admiration. Amongst many other objects of interest the visitor's attention was arrested by a fine old and picturesque avenue of Beech and English Elms, and especially a grand old veteran Sycamore, said to be one of the finest specimens extant, the whole imparting an old-time dignity to the domain.

Complimenting Mr. Menzies on the excellent condition of all under his charge, which he has governed for eleven years, the party next wended their way to the head gardener's residence at



TREE CARNATION E. CROCKER.

Highbury, and were received with a warm welcome by Mr. J. Deacon. The *pièce de résistance* here was the splendid and huge collections of hardy, herbaceous, and other border plants, now in grand array of floral beauty, and established, as they were, only three years ago. The collections comprise two sections in the planting arrangement, the one extending from near the entrance lodge, in wide border style, down the right-hand side of the grounds, with each variety planted in large masses, and the front of the border edged with *Violas*, similarly arranged. This altogether affords a most striking effect. The other collection extends along the lower portion of the grounds, with the park-like fields beyond. Here the plants are arranged in the ordinary mixed style, consequently affording room for a greater variety of kinds. It is sufficient to say that the borders in question are held in much esteem by Mr. and Mrs. Chamberlain.

The new pergola and rock garden also came in for a share of attention from the visitors. The conservatory, Orchid, and other plant houses were next explored with lingering interest, also the fruit houses, containing excellent crops of Grapes, Peaches, and Nectarines, whilst not less interesting was the gigantic stock of *Chrysanthemum* plants, evidencing the highest state of culture. Heartily thanking Mr. Deacon for his kind attention, the visitors, who would fain have protracted their visit at Highbury, returned to the Liberal Club at Acock's Green, where a refreshing tea was in readiness, and after the participation of which votes of thanks were accorded Mrs. Cadbury and Mr. Chamberlain for the kind permission to view their beautiful grounds, also to Mr. Child for the deep interest he evinced towards the enjoyment of the party, while the proceedings closed with music and songs.—W. G.

[This observant and interesting article has been crowded out of our pages week after week since the end of August. It is none the less readable on that account, especially to the Sutton Coldfield men.]

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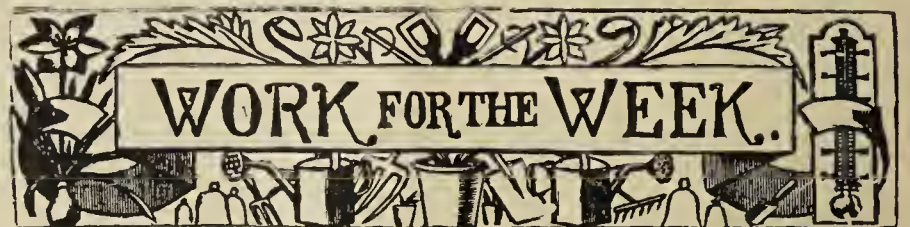
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The above list is published in the hope that it may prove a guide to gardeners or librarians in other centres who have the desire to form a horticultural library. The list was kindly supplied by Mr. John Julien, hon. secretary to the Cardiff Gardeners' Association. In a short preface to the foregoing list of books, the librarian of the Central Library, Cardiff, says:—"The Free Libraries' Committee has ordered to be printed and circulated a series of special bulletins, showing how the libraries provide for different sections of the ratepayers. This bulletin, the second of the series, containing information for gardeners, was first issued in November, 1899. The library is the property of the ratepayers, provided by their own funds for their common use, and every department is equally at the service of the public, the only restriction imposed being good behaviour." Besides having the books, four gardening journals are weekly supplied to the Central Reading Room—namely, "Gardening Illustrated," "The Garden," *Journal of Horticulture*, and "Gardener's Chronicle."



Fruit Forcing.

Peaches and Nectarines.—Earliest House.—The trees are at rest, bright and promising in appearance, the buds not too large or over-developed, and likely to retain their hold on the trees. Where the roof-lights have been removed the border will have been thoroughly moistened, and this, with the invigoration consequent on exposure, is the best safeguard against the buds falling. The trees must be pruned and dressed with an insecticide, thoroughly washing the woodwork with soap and water, the glass with clear water, and the walls with lime-wash. Tie the trees to the trellis, everything being forwarded so that a start can be made at the proper time. Let the lights remain off until the time of closing the house. If the lights are fixed the inside border must not lack moisture, and air must be given to the fullest extent, insuring thereby as complete rest as possible under the circumstances.

Second Early House.—The trees have shed the leaves. Trees that have strong wood take more time to mature than the moderately vigorous, must not be exposed until the growths and foliage are well matured. The exposure of the trees has an invigorating effect, insures perfect rest, and the rains do much to free them of insects, besides properly moistening the borders. When the foliage is all down, the necessary pruning, dressing the trees with an insecticide, and cleansing the house, should be proceeded with, removing the loose surface soil down to the roots, and adding fresh material, but not covering the roots deeper than 2 or 3 inches. In the case of fixed roof-lights watering may be necessary; under no circumstances must the trees be allowed to become dry at the roots.

Midseason Houses.—If the trees are in a satisfactory condition the border will be sound, but when indifferent in fertility it may be necessary to have recourse to lifting, the wood being firm and the foliage beginning to fall. It must be done with despatch, all the materials being in readiness. Provide good drainage, shorten strong roots, and bring any that are deep near the surface, employing the compost moderately firm. Loam rather strong, with an admixture of a sixth of old mortar rubbish, will grow Peaches perfectly. If the soil be light add a fourth of clay marl, and if very heavy a similar quantity of road scrapings. If the loam is deficient of calcareous matter add a sixth of old mortar rubbish. Avoid manure except at the surface. Give a good watering, and the roots will soon get established in the fresh compost. Trees judiciously treated at the roots whilst they have foliage seldom fail to set and stone the fruit satisfactorily.

Borders that have the surface a soapy mass, and it is not possible to remove it, may have a good dressing of air-slaked lime quite an inch thick, mixing it after a time with the surface soil as deeply as the roots allow without much disturbance, supplying quickly acting top-dressing in the spring.

Late Houses.—October Peaches are quite as much valued as those of May, as they are fine in appearance, and when properly supplied with moisture and nutriment during the growing season, juicy and well flavoured. Sea Eagle is one of the best, large, showy, good flavoured, with a juicy flesh, free of the stringiness and mealiness too prevalent in

some late Peaches. As the wood in some late unheated houses is not too ripe, the house may be kept almost closed by day, so as to secure a good heat, admitting sufficient air to insure a circulation, continuing the ventilation at night. Any trees that have too gross wood should have a trench taken out as deep as the roots, and about one-third the distance from the stem the trees cover of trellis, and left open for a fortnight, then filling in firmly.—ST. ALBANS.

Hardy Fruit Garden.

Gathering Filberts and Cob Nuts.—The nuts are now ready to gather, and should be laid in a dry place where they can receive plenty of air to thoroughly dry. They are best stored in earthenware jars, which may be kept closely secured down so that the kernels may be kept fresh until spring. Retain the husks on the nuts.

Preparing Soil for Fruit Trees.—As the planting season is approaching the positions where fruit trees are to be planted must be prepared in readiness for the reception of the trees in a month's time. In preparing a site for standard trees, which are usually placed 20 to 30 feet apart, take out the soil two spits deep from a circle 8 feet in diameter. The bottom spit may then be well broken up, and the soil again returned, not, as a rule, adding manure, but some loamy soil can be introduced with advantage, as well as burnt refuse, to improve the material for planting in. Should the situation be damp it is advisable to raise the soil above the ordinary level, introducing a layer of broken brickbats at the depth of 2 feet. The ground for small trees should be entirely trenched over to the depth of two spits, breaking up the bottom well. Little or no manure is needed for Apples, Pears, Plums, or Cherries; but for small fruits, including Gooseberries, Currants, Raspberries, and Blackberries, employ a liberal quantity of manure when trenching the ground. Soil prepared now will be in excellent condition for planting later on. It has sufficient time to become consolidated, and should work well and be friable.

Thinning Branches of Wall Trees.—It is frequently the case that wall tree are hampered with too many branches, owing to their having been originated in the first instance too closely together. The spurs, too, may be far more numerous than they ought, and if old and elongated it is certain they are the means of causing injury to those in their vicinity. In conjunction, therefore, with reducing the number of the branches, say to a foot apart, also thin out the spurs, and shorten them where elongated. In some cases young growths may take the place of old branches with great advantage to the trees; indeed, a gradual recuperation may be frequently effected by displacing a certain amount of old growths each year in favour of new, thereby entirely transforming the trees from a crowded and unfruitful state to a possibly fruitful and profitable condition. If, in addition to the crowding of branches and spurs, the foreright shoots have not been shortened back at the proper time, this will also be imperative, though the same good cannot result from this late treatment as when carried out at the proper time. One advantage of thinning and regulating crowded trees now is that the foliage is on, which makes it easier to see when the branches are sufficiently wide apart.

Applying Liquid Manure.—Nothing is more beneficial to old established fruit trees which may need extra support at the roots than to enrich the soil to the full extent of the spread of the branches with rich liquid from the farmyard. Food of this character is best applied when the soil is moist. The recent rains have rendered the soil in the best condition for receiving the liquid, which may be given moderately strong. In some positions, however, it takes long continued rain to thoroughly moisten the ground, and as the trees growing in such positions need the soil enriching, recourse must be had to soaking the soil with clear water to bring it to the required state of moisture. Trees growing against walls, for instance, are much more subject to becoming dry than those in the open, the wall assisting largely in draining the moisture away, and also preventing the rain reaching the ground to a great extent. The most generally useful and readily available liquid consists of the drainings from the farmyard, where animal urine and percolations from a mixed manure heap collect into a common tank. Such liquid is especially valuable, as it contains the chief constituents of plant food. Soapsuds and household slops, if mixed in the proportion of four parts of the former to one of the latter, are extremely fertilising in their effects. Fowl manure, pigeon dung, and soot are powerful manures, but a peck of either mixed in 20 gallons of water will not harm fruit trees applied to the roots at this season when the soil is moist. Trees in a weakly and impoverished state will not be benefited immediately so far is apparent, but an improvement will be noticeable the following and succeeding years.

Peaches and Nectarines.—When the trees have been cleared of fruit, the removal of superfluous wood is very necessary to make room for the successional shoots, so that they may become thoroughly well ripened. First cut out the old bearing growths from which the fruit has recently been removed. Weakly, crowded, and ill-placed shoots or branches may be also dispensed with, this affording an opportunity to rearrange the whole lot of branches, and thus allow ample space for all. This pruning and readjustment now will render less attention necessary at the winter pruning, while the trees have the benefit of increased air, light, and space during the completion of wood ripening.—LYMINGTON, HANTS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

Mushrooms with Light Gills, and Others with Dark (Visitor).—The specimens are simply forms of the cultivated Mushroom, *Agaricus campestris* var. *hortensis*, which is very variable, and probably due solely to varietal tendencies, for the variations arise when the spawn is identical, and the manure and soil the same. The light-gilled form accords with the sub-variety *Buchanani*, and the dark is the ordinary cultivated variety.

Ivy on Trees (Subscriber).—Undoubtedly when Ivy encircles the whole stem of a tree, and has grown thick and old, it has an injurious effect. The stout, main branches of the Ivy tighten around the ever widening trunk with steadily increasing firmness, and besides shutting out light and air, the Ivy may check sap-flow. Foresters never allow trees to be Ivy clad, even though they are so beautiful when robed with the dark green leaves of this climber. Of course it is easy to destroy the Ivy by cutting the main stems at the base. We have never seen a tree that has been actually killed through the effects of Ivy.

Name of Grub (A Ten-year-old Reader).—The enemy of your *Cyclamens* is the grub or larva of that too common pest the black weevil, *Otiorhynchus sulcatus*. These live and feed through the winter, and the beetles which appear afterwards do damage to fruit, especially the Vine. This grub is not easy to kill; the application of lime or soot has been found efficacious, but these cannot sometimes be used. They are killed by solution of nitrate of soda, or a weak solution of carbolic acid, also by the well-known liquor compounded of paraffin, soda, and weak soapsuds. It is probable quassia water would destroy them.

Melon Foliage Gone Brown (J. J.).—The leaves are affected by the *Cucumber* and *Melon* mildew, *Plasmopara* (*Peronospora*) *cubensis*, which has only recently been known in England, though very destructive when it does occur, the foliage collapsing in a few days if the disease is allowed to run its course unchecked. Treatment with ammoniacal solution of copper carbonate may be useful in checking the pest, the spraying being very light, and the under side of the leaves reached. The roots of the plant are quite clean, there not being anything wrong with them or the root stem. The fruit is affected by the so-called ripe rot (*Glœosporium fructigenum*), though it usually attacks the fruit when about half grown, and produces a minute canker-like spot or spots (in the case of the Melon), which continue to enlarge and in a rounded form. When the fruit is ripe, or near it, the patches become brown, sunken, and decay rapidly sets in, the flesh of the fruit having a very bitter taste, and the smell becomes offensive. Probably early treatment with potassium sulphide, 1 oz. to 3 gallons of water would act as a preventive of disease, or ammoniacal copper carbonate may be used, applying in the finest possible spray. Destroy all affected leaves or plants and fruits by fire.

Carbonate of Copper Preparation (F. W.).—To manufacture copper carbonate. In a tub or barrel dissolve 6 lbs. of copper sulphate in hot water. In another suitable vessel dissolve 7 lbs. of washing soda in hot water. When the two solutions are cool, pour the second slowly into the first, then add water until the tub or half-barrel (25 gallons) is full. Stir thoroughly, and let the solution stand twenty-four hours, then syphon off the clear liquid and add fresh water. Stir again, and again allow the solution to stand twenty-four hours; syphon off the clear liquid as before, then remove and dry the sediment, which is carbonate of copper. Using the above quantities of copper sulphate and washing soda there will be formed about 3 lbs. of copper carbonate. This precipitated copper carbonate may be used in water for spraying at the rate of 1 oz. to 25 gallons of water. It does not injure foliage, but is not so effective as a fungicide as ammoniacal solution of copper carbonate. This is made as follows:—Water, 9 gallons; strong (26°) aqua ammonia, 12 fluid ozs.; copper carbonate, 1 oz. Make the copper carbonate into a thin paste by adding sufficient water. Add the ammonia water slowly, and when dissolved add the water to make 9 gallons. Thus a clear deep blue solution is obtained, which does not become cloudy or disfigure foliage like Bordeaux mixture. You mention carbonate of copper and sulphate of copper, which is the fungicide known as Eau Celeste modified. The formula is as follows:—Two pounds of sulphate of copper, 2½ lbs. carbonate of soda, and 1½ pint of ammonia (22°); water 32 gallons. Dissolve the copper sulphate in 8 gallons of water, add the ammonia water, then the remainder of the water, and add the carbonate of soda. Stir thoroughly, and the solution is ready for use. We do not advise this, as it sometimes injures the foliage; but the ammoniacal solution of copper carbonate, which has superseded Eau Celeste, simple or modified.

"**Pacific Fruit World**" (*Reader*).—This newspaper is published in San Francisco, California; it is chiefly devoted to the fruit and State interests of California.

Book on Fungi (*Young Gardener*).—There are a number of excellent works devoted to fungi, but the best cheap book on the subject is Cooke's "British Edible Fungi," price 7s. 6d., of almost any bookseller.

Book on Vine Culture (*R. C. D.*).—Try "Pictorial Practical Fruit Growing," price 1s. 3d. post free, from Cassell & Co. We know of no book exclusively devoted to the Vine, other than Mr. Barron's "Vines, and Vine Culture," 5s. 3d.

Budded Roses (*M. C.*).—Remove the ties at once. We should not stop the shoots which have pushed, but should let them grow, and cut them close in at the winter's pruning; that will also be the proper time to shorten the Briar stems back to the buds.

Newspaper and Book Wanted (*W. R.*).—"The Florists' Exchange" is an American journal published every Saturday by A. T. de la Mare, Printing and Publishing Co., Ltd., 2, 4, 6, 8, Dnane Street, New York. P.O. Box, 1697. Telephone 1854 John. Registered cable address, Florex, New York. For a full list of the books on the Dahlia, write to Mr. Jas. Hudson, jun., hon. sec., National Dahlia Society, Gunnersbury House, Acton, W.

Jasminum hirsutum (*B.*).—This dwarf species is an admirable stove subject of shrubby habit, and endowed with prolificacy in the production of large, pure white, fragrant clusters of bloom. The cultural needs are not exacting; indeed only ordinary care and the usual stove treatment accorded to tropical exotics generally will be found to insure a fair yield of flowers at the proper season, which is usually about the month of April. The Jasmines are deservedly favourites with plant growers. A spray of *Jasminum hirsutum* is figured this week. It requires a compost of light turfy loam, sand, and leaf soil, and liberal supplies of water during summer. By means of staking and judicious pruning or tying-in the Jasmines can always be maintained in bushy, compact, and well proportioned form.

Insects in Chrysanthemum Leaves (*H. R.*).—Unfortunately the solitary specimen sent was unrecognisable, being reduced to fragments by the warmth and the shaking in transit. The leaves sent do not give any clue to the exact species, but the damage is evidently done by the caterpillar of a small moth in the Tinea group. It is one of the insects difficult to deal with, because its destruction may disfigure the plant if potent remedies are applied. Of course all infected shoots or leaves should be at once removed and burnt. The eggs are probably deposited by the parent moths during August, when something might perhaps be done to render the plant distasteful to them. Several washes in common use would kill some of the caterpillars, as, for instance, the familiar one made from quassia chips and soft soap Gishurst compound might be of service.

Maggots in Grapes (*F. W. S.*).—No, we have never met with anything like the specimen you sent us, the berries on the part of the bunch swarming with maggots at the junction of the footstalk with the flesh, this being more or less occupied by the maggots, and there were also a great number of pupæ in and on the berries and their footstalks. The pupa, very light brown, have two horn-like projections at the frontal part, with three hook-like points to each, and the posterior end also has a forked termination. No doubt flies will in due course issue from the pupæ. We are keeping some in hope of identifying the perfect insect. At present we can only refer the maggot and pupa to the *Musca* genus, and the species that not only prey upon but breed in animal matter in a state of decay or putrefaction. We do not regard them as causes of the attack, for the berries appear to have been shanked and fermentation set in, so that the Grapes have really rotted, and the flies simply had recourse to them as breeding ground. Probably the flies originated from the manure, which from the ammonia vapour evolved may prejudicially have affected the Grapes, and induced decay at the footstalk of the berries, and the flies deposited eggs in the exposed flesh or putrefying matter. Certainly the maggots change into flies from the pupæ stage, hence it will be necessary to repeat the "fumers" application in order to destroy them. Of course all affected bunches should be removed without delay and burned. The smell of the berries is of a very sour, penetrating nature, and has given us quite a surfeit.

Eucalyptus—Wintering Caladiums (*A. B.*).—We cannot tell what the Eucalyptus may be without some description. There are about fifty species. The Caladium roots should be wintered in pots and kept without water, but the pots placed on a moist bottom, from which they will derive sufficient moisture to keep the roots from shrivelling, and the temperature in which they are kept should be that of a stove—not less than 55°.

Mesembryanthemum cordifolium variegatum from Seed (*Y. W. B.*).—It may be raised from seed, and the best time to sow it is in July, so as to have the plants well established before winter, they either being pricked off in pans or potted off singly, keeping rather dry during the winter. Sow in gentle heat in February, and grow on in gentle heat, pricking off the seedlings when large enough to handle, hardening well off before planting out.

Lady Downe's Seedling Grape (*J. A.*).—This variety of Grape will succeed in a house where it can have a night temperature of 65° when the fruit is setting. This it can have in a greenhouse about the middle of May, after that no artificial heat is required until the time of ripening—about the end of August. The greenhouse ought to be shut-up at six o'clock during the summer months. We do not recommend Lady Downe's to be planted in a greenhouse, but you ask if it could be grown. We may as well say that by far the best Grape for greenhouse culture is Black Hamburg.

Raising Variegated Hollies from Seed (*Leybor*).—The seed will germinate, and a majority of the seedlings will be green-leaved, but these may and often do throw off variegated parts. These may be propagated by grafting, or the green parts cut away. The seeds will not vegetate until the second year. Both green and variegated Hollies may be raised from cuttings—the ripened shoots of the current year put in now in sandy soil surfaced with an inch of sand under hand-lights on a north border. Hollies have the male and female organs in the individual flowers, but some trees do not produce berries, they being for the most part very vigorous.

Storing Walnuts (*D. O. J.*).—Remove the nuts from the husks, and if this be done at the ripening the nuts will turn out very clean, and store away in dry sand in a cellar or other cool place, and moist rather than dry, but not wet. They will keep in this way, or in stone jars stored in dry sand, for a lengthened period, but they will become more or less dried, and this, we think, you wish to avoid, and so do others, as the kernels in a dried state will not "peel," hence the nuts are kept in moist sand or soil to the deterioration of the quality or flavour, for in contact with moist soil or moisture they absorb it, and warmth being present growth must follow. By storing in dry sand, in a moist place and cool, we prevent any loss of flavour and arrest growth, whilst at the

same time obviating the evils of overdrying; and though nuts so kept may not "peel," they may, by placing them for twenty-four or forty-eight hours in rain water, have the kernels restored to plumpness, peeling readily. The time of steeping is dependant upon the dryness of the nuts.

Fungoid Attack on Cucumber Leaves (*Cucumbers*).—The leaves are spotted and blotched and almost destroyed by the destructive enemy of Cucumbers, Melons, and other cucurbitaceous plants, known for some time in the United States, and recently in England, as Cucumber and Melon mildew, *Plasmopara* (*Peronospora*) *cubensis*. The fungus attacks the leaves first, producing pale green or yellowish spots on the upper surface. These spots usually continue to increase in number and size rapidly, involving a large portion, and sometimes the whole of a leaf, and changing to a brown colour as the tissue of the leaf dies. Finally the leaf becomes brittle and falls, often within ten days or a fortnight of the first indication of disease. Very frequently nearly all the leaves of a plant are attacked, and in consequence it ruins the plant for cropping. The fungus, however, does not usually attack Cucumber plants until in bearing, and sometimes not until the late summer, though we have noticed it in June. The parasite, after entering the leaf from a generating spore, develops mycelium between the cells, and sends suckers into the cells to absorb their contents, and also pushes growths from the mycelium into the air, forming very delicate white patches on the surface of the leaf, and the early stages on the under side, but later on from the upper, the conidiophores in the first instance



JASMINUM HIRSUTUM.

branched, later sparingly or not branched, conidia or spores hyaline, elliptical. We advise the destruction of all affected leaves, and spraying with dilute Bordeaux mixture (1 lb. copper sulphate and 1 lb. quicklime to 12½ gallons of water). Perhaps spraying with sulphide of potassium solution would be effectual in preventing the spread of the disease, but it must not be used strong, commencing with 1 oz. to 6 gallons of water, and taking care to reach the under side of the leaves. Repeating at intervals of three days, as you propose, may be attended with good results.

Names of Fruit.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (C., Portsmouth).—1, Winter Peach; 2, New Northern Greening; 3, Ronndway Magnum Bonum; 4, Northern Greening; 5 and 6, both Sugarloaf. (Edw. Walker).—1, Cox's Orange Pippin, slightly out of character; 2 and 3, both Ecklinville Seedling. The tree bearing the small fruits (No. 2) has simply been from a poor stock; it is true to name however. (Admirer).—They are certainly very interesting and of much ornamental value. As we stated in our recent notes, they can be grown in any sheltered, sunny garden. Your specimens, so near as we can identify them, are:—1, Warty Squash, a variety of Cucumis maximus; 2, Striped Gourd; 3, Melon Gourd; and 4, Yellow Bishop's-cap. (Banker).—Apple Lord Suffield; Pear Duchesse d'Angoulême. (Dr. Ticehurst).—Knight's Monarch. (W. Lamond).—We consulted Mr. S. T. Wright, the superintendent of the Royal Horticultural Society's gardens at Chiswick, and he believes your Apple to be purely a local one, having, however, some Gravenstein "blood" in it. We advise you to send it to a meeting of the Royal Horticultural Society next season when it is at its best. The Apple is an exceedingly good one, and is well worth bringing to notice. (A. H. Lawrence).—1, Pear Duchesse d'Angoulême; 2, Duchesse d'Angoulême; 3, Marie Louise d'Uccle; 4, Maréchal de la Cour; 5, Benrre Diel; 6, Improved Keswick Codlin; 7, Ribston Pippin; 8, Ribston Pippin; 9, Lamb Abbey Pearmain. (J. M. F., Bristol).—1, Cox's Orange Pippin; 2, Ecklinville Seedling; 3, Worcester Pearmain; 4, rotten; 5, Fondante d'Automne. (S. G.).—Yes, the Grape is Black Alicante; Peach Barrington. (R. C. Appleton).—All are true to name; the nursery firm you name are noted for correctly named stock. 1, Royal Jubilee; 2, James Greive; 3, Cockle Pippin; 4, Small's Admirable; 5, New Northern Greening. To prevent attack by the Codlin moth, why do you not practise spraying? As you say, the moth, or the grub of it, is very prevalent this season. One can hardly eat an Apple without also having to swallow the larvæ of the Codlin moth. Such a state of things reflects little to the credit of our growers. (R. M. D., Yorks.).—1, Stoke Pippin; 2, Lord Burghley; 3, Cox's Orange Pippin; 4, Worcester Pearmain; 5, Emperor Alexander. (J. H. W., Rotherham).—1, Barchard's Seedling; 2, Ribston Pippin; 3, Yorkshire Beauty; 4, Alfriston. (H. W., Herts).—The Grape is the ordinary White Muscadine so extensively grown on cottage walls throughout the more southern counties of England. It is used for wine making. We ourselves gathered 34 lbs. of this Grape from an old Vine on our own dwelling at Kew, Surrey, the superficial space which our Vine covers being about 90 square feet, and this is certainly a good yield. The Grape that supplies the currants of commerce is a variety of Vitis vinifera, named "corinthiaca," from its being largely cultivated there in earlier times. It is a small, seedless variety. It is also grown commercially at Patras, Zante, Ithaca, and other centres.

Names of Plants.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (H. B.).—Centanrea nigra, the Knapweed. It is a difficult plant to eradicate, and we can suggest no remedy so effectual as that of persistent uprooting, done by hand. (G. A.).—1, Zauschneria californica; 2, Helianthus mollis; 3, Helianthus autumnale striatum; 4, Aster dumosus. (D. A.).—Berberis (Mahonia) nepalensis. (F.).—1, Aster horizontalis; 2, Aster lævis var.; 3, Cimicifuga japonica; 4, Viola cornuta; 5, Junciperus rigidus. (Afred Tait).—1, Solidago cæsia; 2, Doronicum Pardalianches; 3, Panicum longistylum. (Borderer).—1, Hedera Helix elegantissima; 2, H. H. gracilis; 3, H. H. marginata media; 4, H. H. grandifolia; 5, H. H. maderiensis variegata; all are first rate Ivies for training to walls. (A. Jones).—Scolopendrium vulgare marginatum. (M. L. G.).—Euonymus latifolius.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Phenological Observations.

OCTOBER 4TH TO 10TH.

4 Fri.	Sloes ripe.	8 Tu.	White Poplar leaves fall.
5 Sat.	Walnuts ripe.	9 Wed.	Hazel turns yellow.
6 Sun.	Buntings flock.	10 Thr.	Ash leaves fall.
7 Mon.	Maple-leaves fall.		

Covent Garden Market.—October 2nd.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush. ...	2	0 to 6	0	Lemons, Naples, case ...	24 0 to 30 0
" dessert ...	3	0	6	Melons, each ...	0 9 1 0
Bananas ...	8	0	12	Pears, English, ½ sieve ...	2 0 6 0
Cobnuts, lb. ...	0	8	0 9	Pears, French, crate ...	4 0 9 0
Figs, green, doz. ...	1	6	2 0	Pines, St. Michael's, each	3 0 4 6
Grapes, Hamburgh, lb. ...	0	6	1 0	Plums, ½ sieve ...	1 0 3 0
" Muscat ...	1	0	2 6	Walnuts, ½ sieve ...	3 0 4 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz. ...	2	0 to 3	0	Lettuce, cos, doz. ...	1 0 to 2 0
" Jerusalem, sieve	1	6	0 0	Mushrooms, forced, lb. ...	0 8 0 9
Batavia, doz. ...	2	0	0 0	Mustard and Cress, pnt.	0 2 0 0
Beans, French, bushel ...	1	0	2 0	Parsley, doz. bnchs. ...	2 0 5 0
Beet, red, doz. ...	0	6	0 0	Peas, bush. ...	4 0 0 0
Cabbages, tally ...	1	6	3 0	Potatoes, English, cwt. ...	4 0 5 0
Carrots, new, doz. bnch.	3	0	7 0	Radishes, doz. ...	0 6 0 9
Corn Salad, strike ...	1	0	1 3	Shallots, lb. ...	0 2 0 3
Cucumbers, doz. ...	2	0	3 0	Spinach, bush. ...	2 0 3 0
Endive, doz. ...	1	0	1 3	Tomatoes, English, lb. ...	0 2 0 2½
Herbs, bunch ...	0	2	0 0	Turnips, doz. bnch. ...	2 0 3 0
Horseradish, bnch ...	1	0	0 0	Watercress, doz. ...	0 6 0 8
Leeks, bunch ...	0	1½	0 2		

Average Wholesale Prices.—Plants in Pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5	0 to 12	0	Ferns, small, 100 ...	10 0 to 16 0
Araucaria, doz. ...	12	0	30 0	Ficus elastica, doz. ...	9 0 12 0
Aspidistra, doz. ...	18	0	36 0	Foliage plants, var., each	1 0 5 0
Chrysanthemums, doz. ...	6	0	30 0	Lycopodiums, doz. ...	3 0 0 0
Crotons, doz. ...	18	0	30 0	Marguerite Daisy, doz. ...	3 0 4 0
Dracæna, var., doz. ...	12	0	30 0	Myrtles, doz. ...	6 0 9 0
Dracæna, viridis, doz. ...	9	0	18 0	Palms, in var., doz. ...	15 0 30 0
Erica gracilis, doz. ...	10	0	12 0	" specimens ...	21 0 63 0
" caffra, doz. ...	15	0	18 0	Shrubs, in pots ...	4 0 6 0
Ferns, var., doz. ...	4	0	18 0	Solanums ...	8 0 10 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch	1	0 to 2	0	Mignonette, English, doz.	0 9 to 1 6
Carnations, 12 blooms ...	1	0	1 3	Marguerites, white, doz.	
Cattleyas, doz. ...	12	0	18 0	bunches ...	1 0 2 0
Chrysanthemums, speci-				" yellow, doz. bnchs.	0 6 1 0
men blooms, doz. ...	1	0	4 0	Odontoglossums ...	4 0 5 0
" white, doz. bunches	2	0	4 0	Roses, Niphetos, white,	
" coloured, doz. bnchs.	2	0	3 0	doz. ...	1 0 2 0
Eucharis, doz. ...	1	6	2 0	" pink, doz. ...	0 6 1 0
Gardenias, doz. ...	1	6	2 0	" yellow, doz. (Perles) ...	1 0 1 6
Geranium, scarlet, doz.				" red, doz. ...	0 6 1 0
bunches ...	3	0	0 0	Smilax, bunch ...	1 0 2 6
Gypsophila, doz. bnchs.	3	0	0 0	Stephanotis, doz. ...	2 0 2 6
Lilium lancifolium album	0	9	1 0	Stock, white, doz. bnchs.	1 6 2 0
" rubrum ...	0	6	1 0	" coloured, doz. bnchs.	3 0 0 0
" longiflorum ...	2	0	2 6	Tuberose, gross ...	1 6 2 0
Lily of the Valley, 12 bnchs	12	0	18 0	Violets, single, doz. ...	0 9 1 6
Maidenhair Fern, dozen				" double, doz. ...	3 0 4 0
bnchs. ...	3	0	4 0		

Trade Catalogues Received.

Geo. Bunyard & Co., Royal Nurseries, Maidstone.—*Fruit Trees*.
M. Campbell & Son, Anchinraith Nurseries, High Blantyre, near Glasgow.—*Carnations, Picotees, and Pinks*.
Heinrich Henkel, Darmstadt.—*General Catalogue*.
Kelway & Sons, Langport Nurseries, Somerset.—*Kelway's Manual*.
Amos Perry, Hardy Plant Farm, Winchmore Hill, London, N.—*Part II. of "Hardy Border and Rock Plants, Fruits, Shrubs, Roses," &c., &c.*
Ed. Webb & Sons, The Royal Seed Establishment, Wordsley, Stourbridge.—*New and Improved Cereals*.

Publications Received.—"Journal of the Department of Agriculture of Western Australia," August, 1901. Some of the contents are: Cultivation of Sweet Potatoes; The Honey Bee; Pruning Demonstration; Seed Distribution; Insect Pests; Fruit Returns, &c., &c. "Municipal Journal and Engineer," August, 1901. This is a wonderful international magazine devoted to municipal affairs and allied interests. It is splendidly arranged. "The Tropical Agriculturist," a monthly magazine of information regarding products suited for cultivation in the tropics. "Le Jardin" contains articles on New or Little Known Plants; In America; Potato Disease, and Diverse Notes. "The Canadian Horticulturist," special features: Blenheim Apple; Pan-American Horticulture; Our Apples at Glasgow; Timely Topics. "Meehan's Monthly," September, 1901: Coloured plate of Callicarpa americana. "Twenty-sixth Annual Report of the Board of Commissioners," City of Boston (U.S.A.) Dept. of Parks; "Reading College; Agricultural Department, seventh Annual Report of Field Trials, 1900." Contents: Manures for Hay and Pasture; Manures for Rotation Crops; Seeds for Hay and Pasture; Manuring of Crops; Notes on Manures.



More about Potatoes.

THE buyers from the large wholesale markets have been on their annual round of inspection, and we were about to say, purchase, but this year they have, to a large extent, let inspection serve. Little fault can be found with the crops, but their views as regards future prices do not coincide with those of farmers who, at present, cannot see why a 10-ton crop should not be worth double the amount of a 5-ton one. A few lots have been bought by the ton at 55s. on rails, and an exceptionally fine crop of Dates has fetched £30 per acre. Other prices per acre have not transpired, but they are supposed to be much lower, except in the case of a fine plot of the British Lion. This latter Potato is growing in favour, and if it escapes disease bids fair to become a standard variety. It grows too much top, if anything, and keeps growing late, which is a worse fault, but its strong point is its kidney shape, which gives it a distinct advantage over oval or round Potatoes, such as Up-to-Date or Imperator. Only its fine size and quality could have obtained for the first of these its great popularity. Its great cropping powers were sure to attract the favour of growers, who, naturally, are always looking out for weight-producers; but farmers cannot dictate to their customers for very long, and no Potato has had a long reign unless it has been acceptable to the retail trade. What is needed, and we have long been waiting for, is a Potato with the productiveness of the Up-to-Date and the shape of the old Magnum Bonum. Whether British Lion fulfils these requirements another season will probably show.

The new German Potato of the Imperator type, Professor Maerker, is disappointing. The haulm is still very green and full of growth, with no sign of disease, but the tubers are small in size. They are very numerous, as many as forty being found at a root, so there will be plenty of seed. It has very stringy roots, and reminds us rather of the Scotch Champion than of the Imperator. Another new kind, named Dr. or Professor Schultz, from the same source, is being announced, but growers will give a further trial to the Maerker before they are tempted by the other. For summer and early autumn delivery nothing has been found superior or equal to selected Giants. A man we know has been selling Giants for the past two months grown on dark soil, and has realised £30 per acre. A bird in the hand is worth two in the bush, and few will make the price this season. The grower is very safe to follow, for he seldom makes a mistake.

That our own Potato markets can be amply supplied from British sources we are convinced, and British farmers will be well advised to deliver freely at a reasonable figure, and so forestall foreign importations, which are not required, and which would only make matters worse later on.

Potatoes and Pork.

Mr. Rider Haggard, on tour, has found three antidotes wherewith to combat agricultural depression. They are "small holdings," "Potatoes," and "agricultural banks." There is close connection between all three, for small occupiers invariably grow Potatoes, whilst the banks can only be useful to men of small capital. Mr. Haggard has several times pointed out the comparative prosperity of Potato growers, and recommended the extended cultivation of the tuber. But, as in this year of grace, it may occur, and would frequently do so, if the acreage under the crop were much increased, that the supply should far exceed the probable demand. Well, we can supply ourselves with Potatoes, but there is a by-product of the Potato which is in ever-increasing demand. We refer to pork. Pork is the only kind of meat which is worth as much as it was thirty years ago. The demand for good pork and English bacon seems inexhaustible, and live pigs of all kinds and ages are very dear. Yet with home-grown Corn at 9d. per stone, and unlimited Potatoes for the growing, there is practically no reason why we should import an ounce of bacon. We hear a great deal said about the apathy of farmers in connection with dairying and poultry, but much greater force would attach to criticism of their inaction as regards imported pork. Eggs and butter are not produced without much labour and trouble, labour and trouble often badly repaid, but the labour entailed in the production of £100 worth of bacon is hardly worth mentioning when compared with poultry rearing to a similar value. The public are also less easily deceived with regard to bacon than they are with eggs, for most people can tell the difference in taste, and not a few the difference in cooking; but to

most town dwellers an egg is an egg, and they have to take the word of the provision dealer as to its freshness or origin.

Very few large farmers go in largely for hog industry, partly no doubt because they do not grow Potatoes, but that can be easily remedied, and every occupier of 500 acres might grow eight or ten acres with a view to pig feeding, but for marketing when prices are satisfactory.

Potatoes may also be used freely for cattle with proper care, and we have ourselves proved that for cattle and pig feeding they are worth nearly £3 per ton. With dear pork, therefore, and scarce fodder, there must surely be a ready outlet for all the tubers that are not required by the British public for food. There can be no doubt that milk, pigs, and Potatoes are the rentpayers of the small farmers whose success Mr. Rider Haggard describes.

Work on the Home Farm.

How hard and dry the subsoil had become is now abundantly proved by the continued difficulty of ploughing. The rain, though very beneficial to surface vegetation, has penetrated the soil to a very slight depth, and none but those of a loose nature are movable except by the aid of the cultivator. The attempt to plough strong land has proved fatal to horses in one case we are acquainted with, and unless rain in much larger quantities comes quickly the cultivator will be the only available means of providing a seed bed. The labour is greater certainly, for in any case ploughing must precede drilling, but if the swarth has been broken up and worked about, the land may be ploughed one day and drilled the next, with every prospect of a successful result. The soil will have to be in a "Garden of Eden" condition as regards cleanliness if it does not benefit from the dose of fallowing, and fully recon the outlay.

The crop of Mustard is still out in the field. When the weather has been fine there have been heavy night dews, and the withering process has been very slow. Patience will soon be exhausted, and the crop will be put in a heap at the first possible opportunity.

All foals should have been weaned ere this, and proper attention and feeding between now and Ladyday will be well repaid. There is no necessity for coddling; foals really do better out at grass as long as they have a warm shelter during frost and snow, and are provided with a sufficiency of good dry food, apart from any grass they may pick up.

We are sorry that we can chronicle no improvement in the root crops. A sporting friend, with favourable opportunities for observation, gives a very poor report. Early Turnips are especially bad; they are not a bad crop, but so many are cankered and rotten. This is the more serious, as grass and other kinds of keeping are so scarce. The fields look green, but the bite must be a very near one. Lambs generally are being folded on Turnips, and the majority have the food cut for them. Care is taken to have the Turnips up at least forty-eight hours before they are used. Neglect of this precaution is responsible for thousands of lives.

New Crop Corn.—The new Corn trade year is not opening well, so far as prices for home-grown grain are concerned. With big sales in the statute markets, the official average prices now stand at 26s. 2d. per quarter of 480 lbs. for Wheat, 24s. 11d. per quarter of 400 lbs. for Barley, and 17s. 4d. per quarter of 312 lbs. for Oats. Put into values for equal weights, these prices represent 6s. 1d. per cwt. for Wheat, 7s. per cwt. for Barley, and 6s. 4d. per cwt. for Oats, showing that, weight for weight, Barley is now making the highest price, and Wheat the lowest. In arranging for his sowings for the coming year, however, it is useful for the farmer to know the value at current prices of average per acre yields of each cereal. Taking the past ten years, an average crop of Wheat has been 16 cwt. per acre, of Barley 15 cwt. per acre, and of Oats 14 cwt. This gives us £4 17s. 4d. as the present market value of an average acre of Wheat, £5 5s. for an average acre of Barley, and £4 8s. 8d. as the value of an average acre of Oats. In per acre value Barley is again first, but Oats here occupy the lowest place.

Russian Grain Returns.—Information gathered from trustworthy sources by the Minister of Finance gives the following as the result of the grain crop in Russia for 1901. The crop of winter grain has been excellent in the south-western provinces, and it has been above the medium in the Northern Caucasus, in Finland, and in several parts of the western provinces. On the other hand, the crop of winter grain has only been mediocre in the south-eastern region of European Russia and on the shores of the Sea of Azov. The Volga Provinces and those adjoining them have yielded a crop partly above the medium and partly bad. The crop in the Vistula region and in several districts of the Baltic coast has not been satisfactory. Throughout the remainder of Russia the crop of winter grain has been satisfactory. The spring grain crop has everywhere been worse than the winter crop, which is accounted for by the drought. The best yields are those in the provinces of the south-west, where the crop has been above the medium. The countries of the Ural and the Volga, as also the adjoining provinces containing arable land, have not yielded very satisfactory results; in fact, for the most part, very bad ones. The same has been the case in the western provinces as far as the shores of the Baltic. The spring grain crop, on the other hand, has been satisfactory in the Vistula region and in the rest of Russia.

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Journal of Horticulture

THURSDAY, OCTOBER 10, 1901.

Sir Joseph Paxton.



HE name and title, Sir Joseph Paxton, falls resonantly upon the ears of every born British gardener. We are proud of so strong a man; he is symbolical of the beautiful ideal we would all achieve if we could—an honest man, a wise man, a handsome man.

It is fitting to review again, after a lapse of nearly half a century, some points in the career of this past-time gardener, taken from *The Cottage Gardener* of August 29th, 1854. The occasion is the more opportune when, under the great glass palace erected from Sir Joseph Paxton's designs, are gathered from all parts of the British and Channel Islands those pomologists and their productions who sustain the fame of British horticulture throughout the world. In the life-history of this knight of Flora's kingdom is presented the best example we can uphold for imitation to the rising generation of young gardeners. We are often asked by them, "What acquirements should we strive for besides a knowledge of the culture of plants?" and we know of no better reply than we could give than this—"Attain the same acquirements as those possessed by Sir Joseph Paxton." He was a good botanist, a good draftsman, and an excellent engineer. He had two spirits mighty in promoting progress, presiding over these—the spirit of kindness, and the spirit of perseverance. Everyone who associated with him at once felt that genial courtesy and frankness which was to be expected from such an open brow; and the Duke of Devonshire, who so long aided and benefited by his efforts, may be accepted as the most competent of witnesses to his perseverance, bore this testimony—"I never knew Mr. Paxton resolve to undertake

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what he did not fully accomplish." Sir Joseph Paxton's entire career sustains that characteristic opinion.

He was the son of humble parents, born in the year 1803, at Milton Bryant, near Woburn, in Bedfordshire, his father being a head gardener in that county. When he had grown up, young Paxton, adopting the same profession, received his rudimentary instruction in horticulture under his brother, Mr. John Paxton, successively gardener to Sir G. P. Turner and Earl Hardwicke. This gentleman recommended the young gardener to Abel Smith, Esq., and through the latter's influence he was placed at Chiswick, in the gardens of the (Royal) Horticultural Society. Owing to some misunderstanding with the Council of the society, Joseph (afterwards Sir) was about to leave their service and proceed to America; but whilst this intention was just on the point of being carried out, the Duke of Devonshire, president of the society, befriended him. He was brought to the notice of the Duke through his having held a glowing cinder for his Grace's cigar. The Duke finding him intelligent, and hearing of him nothing but good, recommended him to the Duke of Somerset, who employed him temporarily at Wimbledon. When Mr. Paxton thus attracted the notice of the Duke of Devonshire, he was under gardener in the Arboretum department at Chiswick, the latter being then enormously larger than it is now. This was in 1825, and the year following he became the Duke's head gardener and forester at Chatsworth. Here was an arena just suited to his powers, and genius—not only was the space, as he said, "unlimited," but so were the funds at his command for its adornment.

After completing an extensive Arboretum, with over 2000 species of trees and shrubs, the next great works he was employed upon were the water-works, the Emperor fountain of which tosses its waters to the astonishing height of 267 feet. This, and all his subsequent conceptions, are among "the most surprising in the world." In 1840 he completed the conservatory at Chatsworth, the largest ever constructed. It required forty miles in length of sash-bars, and to meet this enormous demand he invented a machine for cutting them, which, to use his own words, "performed the labour of twenty men for one year, and consequently saved in money £1200."

As a literary man he appeared advantageously as the Editor of "The Magazine of Botany," begun in 1833, but now no longer published; as the author, in 1839, of a little volume, "On the Culture of the Dahlia;" as compiler of "Gardening for Cottagers," and the "Botanical Dictionary," the first of which was published about the year 1849, and the other about nine years previously. We have now arrived at the most brilliant period of his life—the construction of

The First Crystal Palace.

Of its origin in 1850 we must republish the designer's own account. "When the six eminent architects and engineers were selected as a committee to choose a design, Mr. Paxton had no intention of offering one, for he took for granted that something worthy of the occasion and of the nation would be selected by them. When the time approached for the production of plans there was a discussion in the newspapers as to the design best adapted, and he considered that the first sketch he saw in a number of the "Builder" did not inspire him with any exalted notions, or raise any very splendid expectations of the result. It was not until one morning when he was present with his friend, Mr. Ellis, at an early sitting of the House of Commons, that the idea of sending in a design occurred to him. A conversation took place between them with reference to the construction of the new House of Commons, in the course of which he (Mr. Paxton) observed that he was afraid they would also commit a great blunder in the building for the Industrial Exhibition; adding, that he had a notion in his head, and that if he (Mr. Ellis) would accompany him to the Board of Trade he would ascertain

whether it was too late to send in a design. He asked the executive committee whether they were so far committed to the plans as to be precluded from receiving another. The reply was, 'Certainly not; the specifications will be out in a fortnight, but there is no reason why a clause should not be introduced, allowing of the reception of another design.' He said, 'Well, if you will introduce such a clause I will go home, and in nine days hence I will bring you my plans all complete.' No doubt the executive thought him a very conceited fellow, and that what he said was nearer akin to romance than to common sense.

"Well, this was on Friday, the 11th of June. From London he went to the Menai Straits, to see the third tube of the Britannia Bridge placed, and on his return to Derby he had to attend to some business at the board-room, during which, however, his whole mind was devoted to his project; and whilst the business proceeded he sketched his design on a large piece of blotting-paper. He was sorry he had not the original with him, but the fact was, Mrs. Paxton had taken possession of it, and if they were at all anxious to see it, the only possible way of gratifying their desires was by sending for her to the meeting. Having sketched his design on blotting-paper, he sat up all night until he had worked it out to his own satisfaction; and by the aid of his friend, Mr. Barlow, on the 15th he was enabled to complete the whole of the plans by the Saturday following, on which day he left Rowsley for London. On arriving at the Derby station he met Mr. R. Stephenson, a member of the building committee, who was also on his way to the metropolis. Mr. Stephenson minutely examined the plans, and became thoroughly engrossed with them, until at length he exclaimed that the design was just the thing, and he only wished it had been submitted to the committee in time. Mr. Stephenson, however, laid the plans before the committee, and at first the idea was rather pooh-poohed; but his plans gradually grew in favour, and by publishing the design in the 'Illustrated News,' and showing the advantage of such an erection over one composed of fifteen millions of bricks and other materials, which would have to be removed at a great loss, the committee did in the end reject the abortion of a child of their own, and unanimously recommended his bantling."

We have but little more to add, for having achieved one, the construction of the second Crystal Palace was comparatively easy. He was justly honoured with knighthood in 1851, and the words accompanying the Queen's smiling greeting in 1854 might have been those used by another monarch to another man of many victories—"If you go on at this rate we shall have to invent marks of distinction for you." This great gardener died in June, 1865.

An Amateur's Melons.

The accompanying illustration portrays ten fruits of a crop, of which there were twelve in all, the variety being Sutton's Ringleader, represented by a single plant. This was grown in a wooden one-light frame, on an ordinary bed of stable litter, by Mr. James Deaman, a baker and confectioner, at Selly Oak, near Birmingham. The judges of the exhibits at the Selly Oak Horticultural Show, held on July 27th, were invited to inspect the crop, then upon the eve of ripening, with the foliage in a robust and healthy state. The only ripe fruit that was exhibited in a small collection at the show in question proved superior in flavour, and, at the persuasion of the writer, the highly successful owner was induced to have the crop photographed, with a view of reproduction in the *Journal of Horticulture*.

The crop was secured without the aid of artificial fertilisation, an additional testimony in favour of the free setting attributes of the variety. The frame (which is an improvement on the ordinary garden kind) was designed and made by the owner himself, the principal feature being a strip of wood forming a flange upon the sides of the sash, so as to prevent rain from penetrating to the framework beneath. In an adjoining one-light frame there was also an excellent crop of Cucumbers, whilst the crops of vegetables, flowers, and fruit growing around in the small, cottage-like garden, bore additional testimony to the owner's industry and prowess as a novice in the art of gardening.—G.

Fruit in the West Country.

There is a partiality that is most marked in the Apple crops of the West; in some districts there is an abundance, the trees being loaded almost to breaking point, while other growers have but few. Some instances occur to my mind as I write in which I am told that the supply of cooking Apples is already exhausted in gardens even at this early date, and dessert fruits are scarcely more plentiful. This lightness of crop, too, in some cases affects large districts, judging from visits paid to other gardens, and the opinions expressed by visitors around me. There is an unanimity in the varied reports that the Apple crop of the West is, generally speaking, much below the average. For the season our crop is exceptionally heavy, and the fruit in the majority of cases of full, average size.

Some trees were so heavily laden that supports were necessary to keep the points of the branches off the soil. Stirling Castle, Rambour Franc, Cockle's Pippin, Lord Grosvenor, Ecklinville, Warner's King, Peasgood's Nonesuch, Bismarck, King of Pippins, Claygate Pearman, Tower of Glamis (see illustration on page 330),

Bush v. Wall Pears.

Though quality may be equal—probably superior—in Pears gathered from the open tree, there is no denying the fact that it is from the wall tree one must look for the finest and handsomest fruits. In proof of this it is only necessary to have duplicate trees of any particular kind, and compare the fruit in a gathered state. The warmth afforded by the walls has a marked effect both on the size as well as the skin of the Pear. A curious point of the case of wall-grown Pears is that birds and wasps seem to pass them almost or entirely unnoticed. I have observed this to be so in most seasons, whether in times of scarcity or plenty, though this experience may not be general. Established trees having their roots deeply in the soil, or the surface protected by mulching, appear to revel in a warm, dry summer. The growth of our trees were never more satisfactory, and but for the enemies complained of the crop could not fail to satisfy the most exacting, despite the slight rainfall, prolonged periods of drought, and the tropical heat of summer. Shallow or poor soils would not support this experience, and gardeners having such land to deal with would find it difficult to accept such a version. The fact, however, remains the same, and can endure a generous argument or a severer criticism.



AN AMATEUR'S MELONS.

Ribston Pippin, Sturmer Pippin, Reinette de Canada, and Court Pendu Plat are a few that have been well cropped. Some bear heavily in alternate years. Stirling Castle and Cockle's are two that have this trait. On page 331 an outline figure of the latter variety is furnished.

Pears.

These generally are more plentiful than Apples, some trees and sorts being too heavily cropped, in fact. Birds, however, have been exceedingly voracious, and, together with the wasp plague, have reduced the crop very considerably; so much so, in fact, that some trees have been cleared before they were ripe, and others would have had none but for muslin bag guards. The tits of both the large and small kinds have given endless trouble; blackbirds, thrushes, and starlings (?) also add to the worries of fruit time.

Very few trees were without fruit, and the majority bore crops above the average. Doyenné Boussoch and Beurré Hardy were very attractive to visitors and to birds. The former is an exceedingly handsome Pear, though unfortunately its season is short and early—October. Others kinds that have borne freely are Duchesse d'Angoulême, Conseiller de la Cour, Winter Nelis, Bon Chrétien, Triomphe de Vienne, Beurré Baltet Père, Alexandrine Douillard, Beurré Clairgeau, Brown Beurré, Napoleon, Beurré Diel, Glou Morceau, Louise Bonne of Jersey, Doyenné Boismond, and Doyenné du Comice.

Summer and Autumn Plums.

These have been plentiful, and the quality very good. It is not a little curious that, though the summer has been warm, Plums have not been much influenced in their maturity, and it is very striking how their ripening is retarded when the crop is heavy. I saw Jefferson's being gathered on the last Thursday in September by no means over-ripe. The same kind was shown by many exhibitors six weeks previously. Golden Drops and the Bavays continue the Gage season into October. Grand Duke, Monarch, Blue Impératrice, and Coc's Late Red will afford dishes of coloured Plums for some time yet.

In the Fruit Room.

The present is a busy time, and whether the store is a large, medium, or small one, there still remains the same necessity to carefully examine stored fruit to remove damaged or decaying specimens. Thin down any that must, from force of circumstances, have been stored thickly, as early as possible. Maintain a cool temperature and an absence of light in order that the best is made of what there is, and to prolong the season as far as possible into the winter. Choice specimen Apples and Pears that have small bird-picked holes in them can be sometimes preserved for a good time if the punctures are filled with dry plaster of Paris, or a small square of gum plaster neatly applied.

Choice Pears, particularly late sorts, are being placed in boxes in single layers, and stood on the floor of the fruit room, this with a view to prolong their season. Stood on open shelves in the ordinary fruit room, they mature much too fast, and despite the exhaustive variety there is in Pears, there are but few that with certainty can be depended on for supplying the table at about Christmas and later. It is then that a little trouble becomes well repaid, if in their treatment they can be made to last out the winter season. Hay and straw are bad materials for storing fruit on, though I have often seen it in use. Clean paper is much better. Strong-smelling hay is distinctly offensive to Pears, because their flavour is so quickly tainted.

Winter Moth.

There is a great outcry in some localities against the ravages of the Winter Moth, evidence of their presence being so distinctly apparent in the great waste of fallen fruit. It is a good and a necessary practice to gather up this fallen fruit and put it to an immediate use. By these means it is said that much of this dreaded Apple enemy can be destroyed. In orchards where fowls have a free access there do not seem nearly the same amount of "maggotty" fruit as in the garden. In the confines of the garden, however, this is an impracticable remedy, because the domestic fowls and the gardener are so entirely averse one to each other in their methods. But for this failing, their help would be much in request in clearing the garden of obnoxious insects, both winged and otherwise.—W. STRUGNELL.

Fruit for the Million.

There is a wide difference between the gardener who grows fruit for the supply of a private family and the individual who grows entirely for profit. As a cultivator the former is very often the better man of the two, because fruit growing is an important branch of his business, and his aim is to get the best examples. The latter may be anything—a farmer, tradesman, or amateur, who observes an opening for profit in this direction, and becomes one of the community known as market growers. But the conditions are different, and there are plenty of men who manage to make a profit out of their fruit who would be quite at sea in a private establishment; while, on the other hand, there are private gardeners who have launched into commercial fruit culture and made a hash of it, simply because their methods have not been suited to the circumstances.

Perhaps there could be no better place for observing the varied aspects of commercial fruit culture than the "Garden of England," and that Kent has a reputation in this direction no one will deny. Nor is it undeserved. Soil, climate, and situation do much to forward the industry, and with the teeming millions of London within a day's journey, it seems as though the country is doubly blest. In certain respects every advantage has been taken of the facilities offered, and in spite of the thread-worn story about English methods of culture being indifferent and behind the times, tons of fruit are grown on Kentish market plantations, on the very best of modern principles. The growers in these cases are shrewd, practical men of business, who, knowing what the public wants, endeavour to supply it. But the bad is lamentably apparent amongst the good. This fair country has its blighted spots. There are orchards and plantations unworthy of the name, in the hands of men who would be better without them, and tenanted by examples of trees and bushes that are only encumbering the earth, and doing no material good to anybody.

Swanley and Its Neighbourhood.

An interesting feature that strikes one about Kent is the way in which certain fruits predominate in different districts. This proves that the soil in one locality is suited to one class of fruit, which forms the staple, and growers have seen the wisdom of planting largely of it. Nowhere in the British Isles, perhaps, will Cherries grow as they do in certain districts in the neighbourhood of Sittingbourne. There you may see mile after mile of orchards, containing giant trees that are an excellent source of income to the growers. This is the Cherry ground of Britain, and Kent monopolises the home production of this luscious fruit. In the fields round Swanley and that neighbourhood the Strawberry holds the sway, and the rich retentive soil grows the fruit to perfection. The majority of the county's Raspberries are grown in the locality, though you may see odd fields dotted about in other parts. Perhaps the Weald of Kent produces the best Apples, and the moist holding soil suits the constitution of the Black Currant. No district produces finer Gooseberries than the country between Canterbury and Sandwich, though this fruit, and Plums, appear to have no strong likes and dislikes, but do well in nearly all parts of the county.

And what a community is engaged in growing fruit for the million! There are big proprietors who cultivate hundreds of acres of fruit land, and account for hundreds of tons of produce

every year; farmers who combine fruit culture with Hop and Corn growing, sheep-breeding, cattle-feeding, and the rest; small proprietors who own their freeholds, and in making a living by the fruit grown on small areas, make one think that it is a pity there are not more of them; and capitalists who take land and launch into the business without having much practical knowledge of it. Combination is not a great power. As a rule every grower, large and small, is a proprietor on his own account, independent of his neighbour, both as regards production and distribution, and doing his business through that common medium, the market salesman. The advantages of co-operation have been pointed out many times to all who produce commodities from the land, but the British farmer, whether his speciality be fruit or dairy produce, doesn't seem to see it. Rightly or wrongly, he prefers to dispose of his produce himself, and in his own way, and make the most of the results.

Market Men and Market Methods.

But in the selling of fruit there are men interested who are not necessarily growers nor retailers, but speculators in a middle sense. There are many fruit growers who prefer only to cultivate their crops. They wipe their hands of the responsibility of picking and marketing the produce by selling it as it stands. The purchaser buys it under the hammer at an auction sale, and then makes the best of it. He may come out all right, as a rule, but there is a risk about the business, and a few hundreds of pounds can soon be sunk in buying orchards of fruit. It is necessary for the buyer to be a good judge of crops, and he must also be able to anticipate the market somewhat, for after paying for the produce he has to pick, pack, and sell at his own risk. I know a man who dabbled in Cherries last year, and did a good stroke of business. He plunged a bit deeper this season, but the fruit became a drug on the market, and while the man in the street was congratulating himself on being able to buy a pound of Bigarreaus for a penny, my friend was cogitating over the salesman's returns, which did not show sufficient balance to pay picking expenses, to say nothing of interest on the capital invested.

There is a certain philosophy about the growers who "send their fruit up" and hopefully wait for the returns in the old-fashioned way. They have confidence that the salesman will do his best for them, and when the sieves are packed away in the railway trucks they have wiped their hands of them, so to speak. They sit at the railway siding and see the trains dash through laden with produce from the Continent, but wait for the vans that serve their turn. They group together and discuss the returns, bemoaning their hard luck if the balance is small, but accepting the situation as inevitable. Covent Garden and the Borough are the main hopes of many of them, and they are apparently content with the system. I remember seeing some time ago a glowing description in a daily paper about a service of motor-cars that was to travel to and fro to London with fruit and other commodities. I do not know how they progressed, but I observed the other day a tiny paragraph of about four lines in the same paper, stating that the motor service had been abandoned owing to numerous breakdowns, and the difficulty in collecting produce. Evidently the advantages of motors are not yet realised.

Surplus Fruit.

The question of what to do with surplus fruit in seasons of glut is one of pressing importance. It is pitiable to see wholesome fruit wasted when there are thousands who would be glad of it. The grower, who is the greatest loser, says he cannot help himself, and the difficulty remains unsolved. A correspondent to a newspaper settled the matter the other day, apparently to his own satisfaction. He advocates the erection of jam factories, on a kind of profit-sharing system, in various centres to deal with the fruit where it is grown, and pointed out how everything might be managed and a profit be shown. The scheme looked well on paper; but somehow rural jam factories have not answered in practice, and I know several buildings of the kind that could, I fancy, be bought at a reasonable figure, considering the time they have been for sale. Fruit-drying is advocated by some, but it does not seem to gain headway; bottling does not appear to pay, and, in the meantime, the grower sells what he can, and when he can sell no more at a profit it goes to Mother Earth of its own accord.

Injurious Pests.

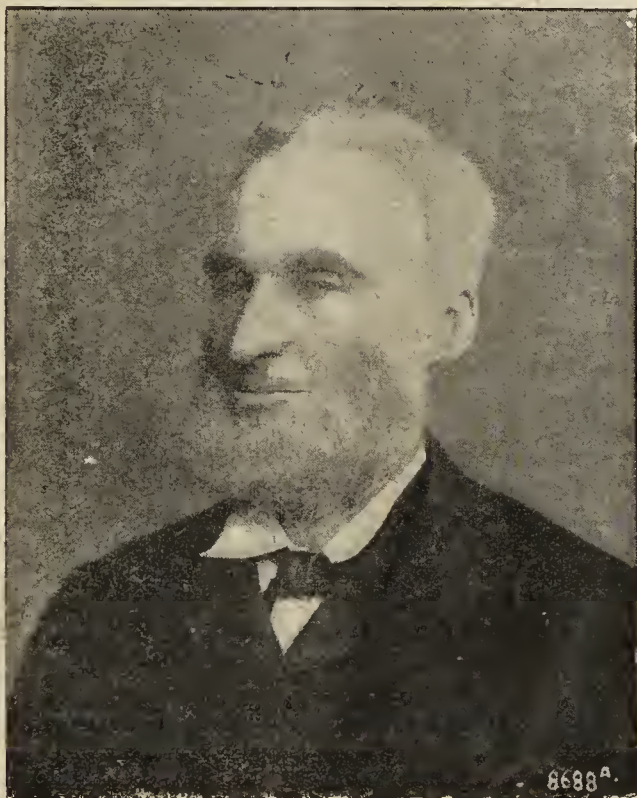
The market fruit-grower has a good many opposing forces to contend with, and insect pests figure conspicuously amongst the number. I should not like to say how many Apples have fallen this year through being bored by the Codlin moth caterpillar; but a correct return would surprise many. There are growers who observe the importance of keeping trees clean, and fight the insects tooth and nail. But many others are very lethargic about this matter. They daub a little limewash on the stems of the orchard trees as a matter of custom; but to them, sprays and washes are something that you read about. If considerable damage is done they put it down to the season, and accept it as inevitable. If they come off fairly well they are thankful; but when a pest ruins the tree as well as the year's crop the grower is alarmed, and a case in point is the dreaded mite in Black:

Currants. This mysterious pest is doing untold damage in the country, and threatening the very existence of the most profitable of small fruits. If any man wishes to secure the undying gratitude of Kentish fruit-growers all he has to do is to come forward with a practical and efficient remedy.

The members of the feathered tribe are amongst the natural foes of the market fruit-grower. They peck out the buds on the bushes, and devour the fruit when it is ripe. He has various ways of dealing with them. In the Cherry orchards when the fruit is ripe men patrol beneath the trees armed with guns, and a constant fusillade is kept up from early morn to eve. But here we have an instance of co-operation. Sparrow clubs exist in various centres (though sparrows are not the only game), and during the winter months the members wage war against the different birds that injure the fruit, for the prizes offered for the heads of the evil doers, which are presented on the meeting nights. In the dusk of evening you may see youths and men going out armed with nets and poles, with murderous intent, and the roosting sparrows meet their doom. Extermination, did someone say? Not a bit of it! They seem to thrive under the persecution, and every season there are birds enough to worry the growers and get a fair share of the fruit.—H.

Mr. Charles Ross.

Some of the best of the recent varieties of the Apple have been raised by the old Scottish gardener, Mr. Charles Ross, whose portrait block the Messrs. Horne, of Cliffe,



MR. CHARLES ROSS.

have kindly placed at our use in the present number. The Charles Ross Apple, of which he was the raiser, will bear his name to posterity. Mr. Ross has long been famous as an exhibitor. Since 1862 he has gained over eleven hundred prizes, including certificates for new subjects. Gold and silver cups, silver and bronze medals.

He is head gardener to Col. Archer Houlton, Welford Park, Newbury, Berkshire, where we hope he may be engaged in his patient work for many years to come. His figure is familiar at the Drill Hall meetings of the Royal Horticultural Society, where he has nearly always an exhibit of fruit.

The Charles Ross Apple is proving a good cropper, which is fortunate, as there is but one bearing tree of this variety in the world, and that is the mother tree, grown from a pip sown by Mr. Ross in a flower-pot, October 14, 1884. We hope to see a good dish of it exhibited on Messrs. Horne and Sons' stand at the Crystal Palace Fruit Show, being held to-day, to-morrow, and Saturday.

A Select List of Apples.

Where there is room to grow a number of trees, both dessert and culinary varieties should be included, as both are valuable, and by this means, and growing early, midseason, and late varieties, the season may be extended from August to the following spring. Of course, the majority of varieties require a room to store them in, a suitable structure where the fluctuations of temperature are not great, and which is also perfectly dry, cool, airy, clean, and sweet. There should be means whereby the place may be artificially heated during spells of sharp weather, or when it is necessary to drive off any excess of moisture. Success, however, in keeping Apples in good condition does not altogether depend on the fruit room. Much depends on clean and good culture, which ensures the best examples of fruit, careful gathering, and frequent examination afterwards so as to dispose of unsound fruit.

Dessert Apples.—During August there are some excellent varieties fit for gathering and eating. Mr. Gladstone, of medium size, is one of the first ready for table use, especially if grown on the Paradise stock. It is most prolific on that stock. It carries a beautiful bloom, mottled red with yellow streaks. Red Juneating or Early Red Margaret, of medium size, very early, and of good flavour; does well as a standard. Beauty of Bath is a valuable Apple of medium size, handsome in shape, bright red with white spots; the flavour is brisk and sweet. When the trees have become established, either as standard or bush, they bear freely. Irish Peach is a pretty early Apple, colouring well, rather small, and can be eaten direct from the tree. It makes a very good shaped standard tree.

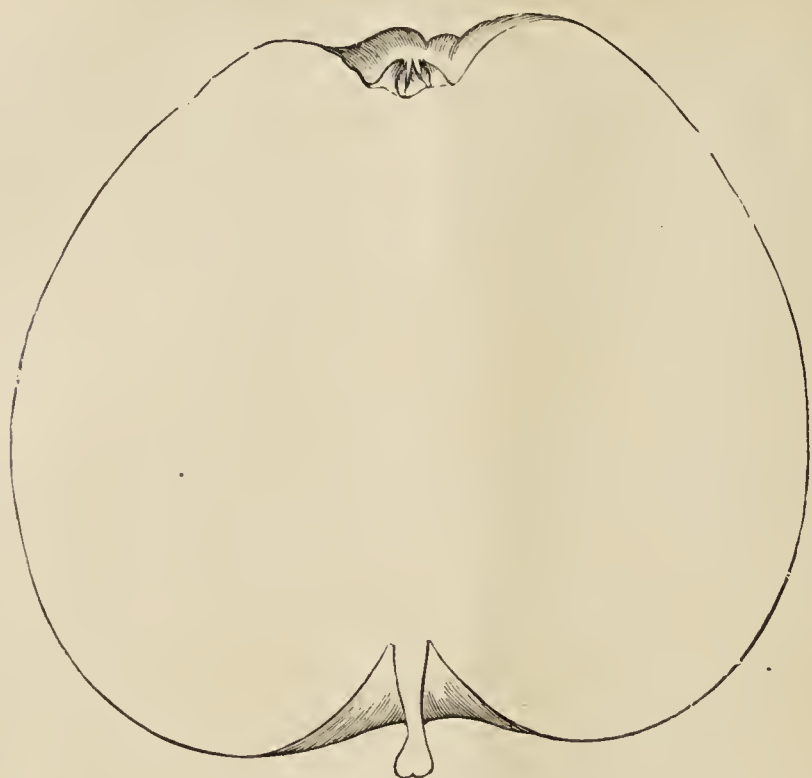
Lady Sudeley is larger and finer Apple than the preceding, and one of the finest dessert Apples for use direct from the tree. The fruits are very attractive, being beautifully striped with crimson, and the flesh is of a soft melting character. It is best grown as a half-standard, from which the ripe fruits may be readily gathered. The fruits are not improved by storing. Since its introduction by Bunyards of Maidstone in 1885 it has yearly advanced in favour. Devonshire Quarrenden is a good variety, very attractive in appearance, the fruit being bright red, and is especially handsome when free from fungoid attacks. It makes a handsome tall standard, but in this form does not always bear every year. Fine fruits are produced on trees grown on Paradise stocks. Worcester Pearmain comes into use in September, and is one of the handsomest and richest coloured of early autumn Apples. It is of a symmetrical conical shape.

American Mother is at its best in October, but may be used earlier. Good specimens will keep some time. The fruits are tender, juicy, and sweet. King of the Pippins is an excellent variety, and an almost constant bearer of rich golden yellow fruits of medium size. The best trees are those of upright growth. The fruits will keep until January. Ribston Pippin is, of course, a well known variety, but does not succeed only in warm soils and aspects. The fruits, which are of medium size, have an aromatic flavour, and will keep until January. Cox's Orange Pippin is a small but a handsome variety, and one of the finest dessert Apples for use in November to January. The fruits should be left on the trees until October, and as long in that month as possible. Low trees on Paradise stocks are the most productive.

Blenheim Orange is one of the best late varieties, either for dessert or cooking. The fruits keep well until February. They are large, with yellow flesh, and are sweet and juicy. Standard trees are tardy in coming into bearing, but it may be grown as a bush. It succeeds on the Paradise stock, which brings it earlier into bearing, especially if a little root-pruning is adopted. Sturmer Pippin is perhaps one of the best late kinds, keeping well until June. Leave the fruits on the trees as long as possible. It has a Ribston flavour, and succeeds well as a standard, also on Paradise stocks.

Kitchen Apples.—As an early and first-rate variety, which is quite ready for use at the end of July and early August, Keswick Codlin is one of the best. The most profitable trees are standards, but it is productive as a bush. The fruit is yellow. Lord Suffield, which is larger, forms a good succession. This is a profuse bearer of large green skinned fruits, which are excellent for kitchen use, being one of the best during September and October. In damp situations the trees are apt to canker.

Lord Grosvenor is the better variety to plant when the former will not succeed. This is a very large, free-bearing Apple of the Codlin class. It is similar in form to Lord Suffield, but is yellow skinned. Ecklinville Seedling is another excellent Codlin of the free-bearing kinds. It is in use during September and October, and will keep through the latter month. Peasgood's Non-such claims to be the grandest fruit grown. It is very similar to Blenheim Orange, but larger, and has more colour. It is a November and December fruit of first-rate quality.

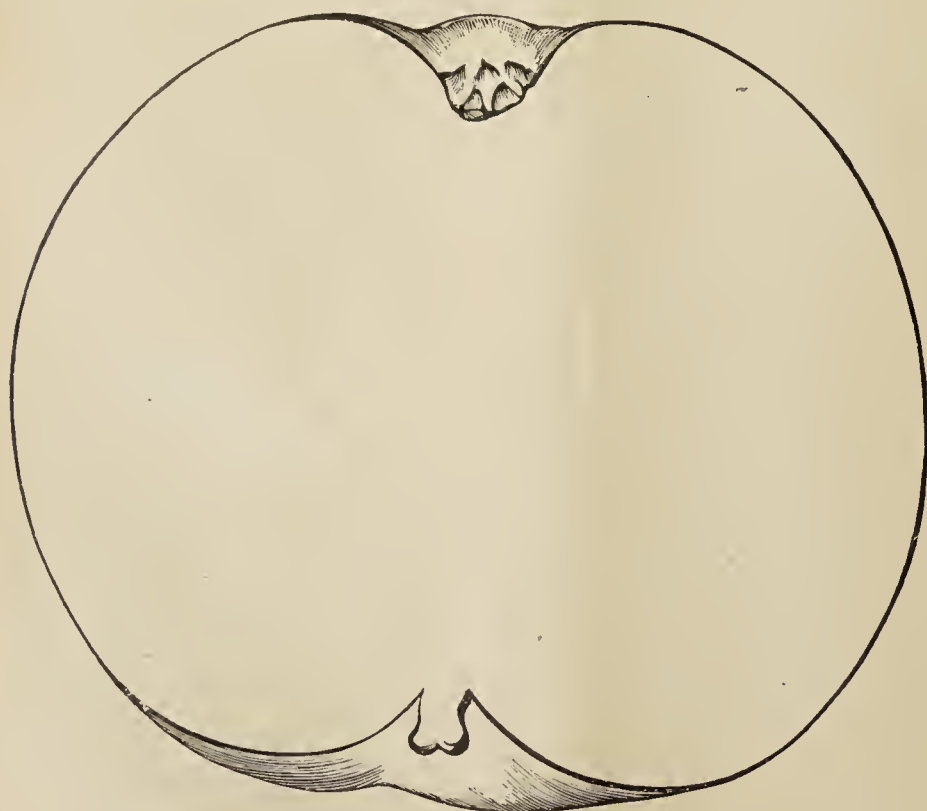


APPLE TOWER OF GLAMMIS.

Bramley's Seedling is a good late variety, large and flat, with a dull red cheek. It is a good keeper. The tree is of vigorous growth, and when established bears freely and constantly. Newton Wonder is a new kind of good keeping qualities; also grows and bears freely. The fruits are of a clear yellow, shaded crimson.

Annie Elizabeth will also keep good until April. A large Apple, with plenty of colour, and a good cooker. The trees make stout upright growth. Wellington, Normanton, or Dumelow's Seedling is well known as one of the very best kitchen Apples. It should be established as a standard in good positions on well drained ground. The fruits are large. Chelmsford Wonder is another fine late variety, and will keep as long as Wellington. The colour of the fruit is yellow, with red spottings. It is an excellent bearer of fine large fruits.

The foregoing are all good, reliable Apples, adapted chiefly for warm, fertile, and well drained soil. Apples as a rule will succeed in stiff ground if the subsoil is free from stagnant water. In situations where ill drainage is the cause of failure, it is advisable to plant on raised mounds, and to artificially drain the subsoil with a layer of broken bricks and stones, in order to prevent the roots descending into an uncongenial medium. The lateral growth of the roots thus made will be in a warmer and drier medium, and if duly fed and supported with annual mulchings of manure, and appropriate fertilisers applied, good crops of fruit will annually result.—E. D. S.



APPLE YORKSHIRE GREENING.

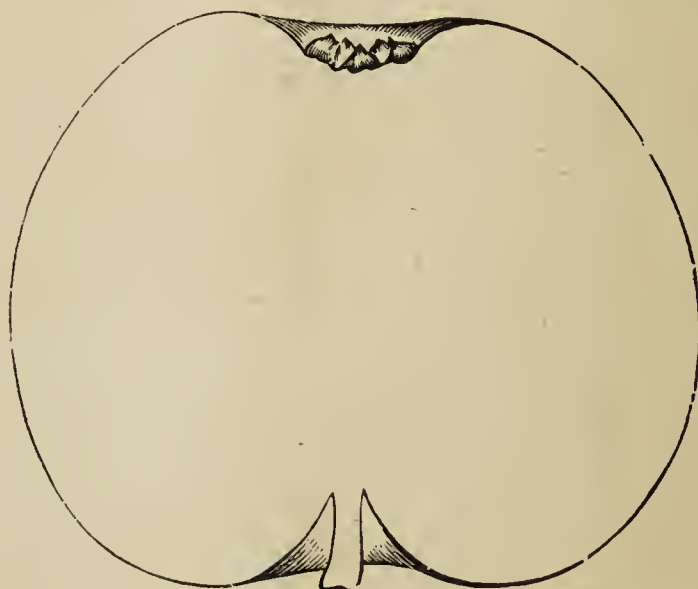
Our Illustrations of Apples.

Special attention is directed to the outlines of fruit representing six splendid varieties of Apples on these pages. These are—1, Apple Tower of Glammis, with large, conical, distinctly four-sided fruit, whose season for use is November to February. The tree is an excellent bearer, and is one of the finest culinary Apples to be found in the Clydesdale orchards, and gardens of the Carse of Gowrie, in Scotland.

The next is that beautiful Apple, Yorkshire Greening, also culinary. It is useable from October to January, and has much to recommend it. Golden Reinette has many synonyms, and Dr. Hogg gives a full list of these in his "Fruit Manual." The undersized fruits are golden in colour, and produced in the greatest abundance. As a variety, Golden Reinette is largely grown, or used to be, in gardens and orchards around London for market purposes. It likes a light, warm soil, whence it grows vigorously. It is purely a dessert Apple, in use from November till April.

Cockle's Pippin, an excellent dessert sort, was raised in Sussex. Its flavour is very fine, and the fruits are in use from January to April.

Nearly every Apple grower has Alfriston, whose fruits are of the largest size and very handsome indeed. Coming into use in November, this culinary Apple lasts good till April. On well-drained soils Alfriston does grandly, and grows vigorously, besides yielding heavy crops. And, lastly, there is the famous Galloway Pippin, which, as Dr. Hogg has



APPLE GOLDEN REINETTE.

stated, "has been cultivated in Wigtown, N.B., from time immemorial." Our outline figure shows its general character. As a kitchen Apple few are better adapted for the North, where it lasts well into the new year.

Early Dessert Apples.

ALTHOUGH very many good Apples can be had quite late in spring, there are few fruits that are so looked forward to as the early dessert sorts. There is a freshness about an early ripened Apple that is not found in any other fruit, and it is not second in importance to the first Strawberry in many gardens. We have plenty of good midseason sorts, and their list is being added to yearly, but the number of really good early dessert Apples may be counted on the fingers of one hand.

Perhaps some may be inclined to disagree with me, but personally I do not think there is anything to beat the old Devonshire Quarrenden. When the tree is thriving it is a fine bearer, and its very handsome appearance is all in its favour. The flavour is always rich and juicy, never mealy as in some other sorts, and taken all round I know of no other that could take its place. Duchess' Favourite is a good second, a beautiful fruit of excellent quality, the skin thin, and coloured glossy red under all conditions of culture. A couple of nice standard trees of this fine variety would be a boon in any garden where there is a brisk demand for dessert fruit in August. Neither of these fine varieties like hard pruning.

Irish Peach is a pretty Apple, and when taken just at the right time is very pleasantly flavoured; but its season is short, and though

a free bearer it is often found that the whole of the crop cannot be used owing to the later fruits being mealy and tasteless. Duchess of Oldenburg and Mr. Gladstone are both soft and wanting in flavour, but the very early date at which the latter is fit for use renders it useful. Lady Sudeley, again, has the same fault, handsome though it is, and will never become really popular on this account. The large handsome fruits of Worcester Pearmain endear it to shopkeepers and market gardeners, but as to quality, the less said the better.

King Pippin, and Yellow Ingestrie are rather better; so is Red Astrachan, but there is room for improvement in all. I suppose we shall look in vain for an early Apple with the flavour of Cox's Orange and other late maturing sorts, but when one considers the large number of new fruits sent out annually it is remarkable that we have not yet succeeded in getting a really distinct improvement on the old sorts, for *that*, the majority of the new ones are certainly not.

—H. RICHARDS.

Indoor Fruit Culture.*

THE culture of high-class indoor fruit is one of the most important phases of a gardener's training, and as the glass protection insures him a yearly full crop, independent of the season, it must also be regarded as one of the most profitable. It would be useless with the short time



APPLE COCKLE'S PIPPIN.

at my disposal to give anything approaching a full digest of the matter, and I shall therefore confine myself to a few of the most popular fruits, and refer briefly to certain points in their culture that are occasionally overlooked. First as to

Soil.

All books on fruit culture give the constituents of the compost for the various trees, and all agree that its proper proportion is a very important detail; but a fact that is not so frequently mentioned, is, that fruit trees of all kinds grown under glass need these composts very firmly placed. When making borders for Vines, Peaches, Nectarines, Figs, and other fruits, the nature of the loam used must be taken into consideration, and the heaviest class of soil need not be quite so firmly rammed as those of a lighter description. But as showing how firm the borders ought to be, I may mention that in preparing fruit borders of a very heavy loam in Suffolk, I always allowed three men with rammers to one filling in, the result being a border almost as firm and hard as a road. In this class of border the roots produced are hard; they ramify more freely than they would in a loose compost, having a greater number of feeding points, and are in every way more satisfactory. As showing the advantages of this I planted a large span-roofed house of Peaches and Nectarines some years ago, and although most of the varieties were very strong growers, including the vigorous Early Rivers Nectarine, yet I had no occasion for root-pruning until the trees filled the house. Three years later I lifted every other tree to give the remaining ones room, and so well had the roots kept in their place that very few of those cut were larger than

* The essay on the above subject was delivered before the Bristol and District Gardeners' Mutual Improvement Association in May last, by our able and experienced friend Mr. H. R. Richards.

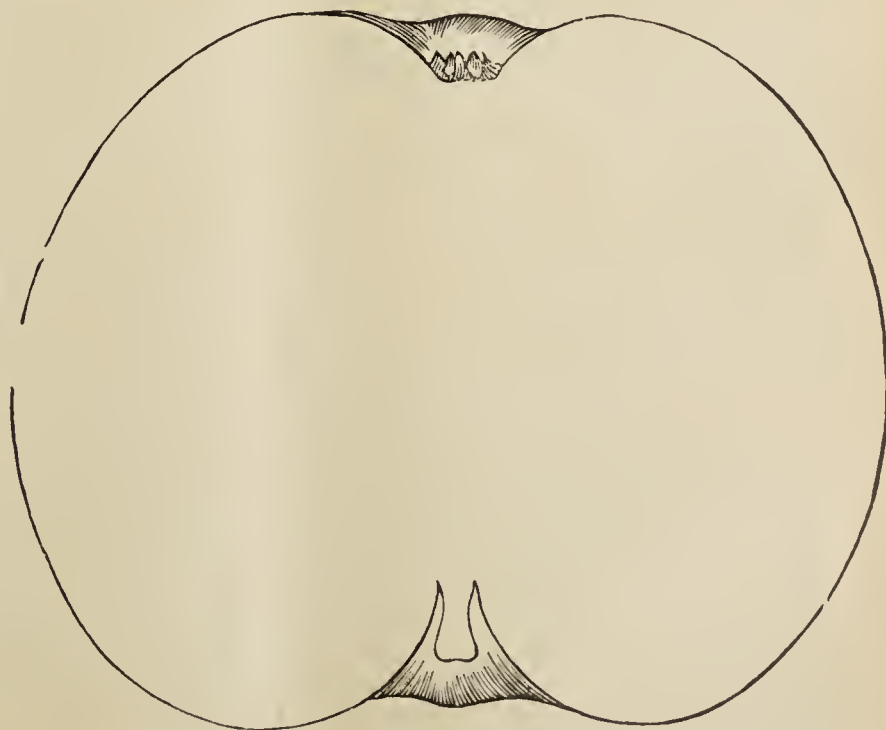


APPLE GALLOWAY PIPPIN.

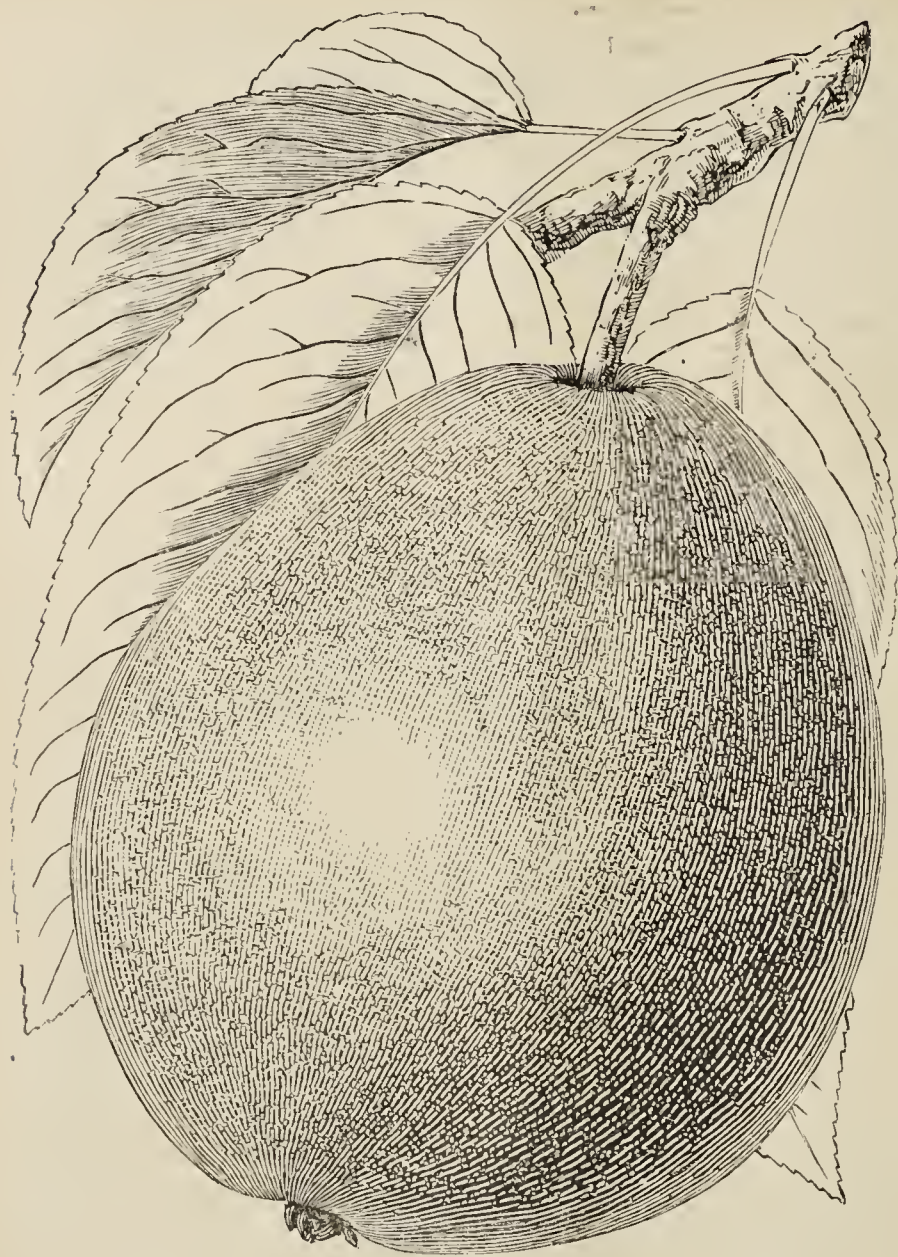
a man's finger, and the trees all carried a heavy crop the ensuing season. I may say in passing, that by far the most satisfactory time to transplant large trees is just before the foliage turns colour preparatory to falling.

Qualities of Soil.

The fact of splendid fruit crops being produced on soils of widely differing character shows plainly that almost any class of soil may be rendered suitable for the purpose. The gardener with an unchangeable formula for his Vine or Peach borders is, or should be, a thing of the past. Tons of the finest Grapes that are annually sent to our markets are grown on the natural soil of the locality in which the growers have settled, with no further preparation than trenching and the addition of suitable manures. I am not saying that this cheap preparation would answer in all places. Market growers are shrewd men of business, and one of the first considerations before they decide upon a site for their houses would naturally be a good depth of fertile soil. Private gardeners are sadly handicapped in comparison with these men. They have to produce good crops of fruit, no matter what the nature of the soil, and where this is really unsuitable it is, of course, necessary to excavate and provide fresh suitable soil for the borders. Again, with respect to concrete bottoms and elaborate systems of drainage, these are often entered upon at great expense to the owners where they are really unnecessary. No gardener who has the true interest of his employer at heart would recommend the planting of Vines, Peaches, or other fruits on the natural soil unless he had good reasons for thinking that the results would be good. Neither would he, on the other hand, put his employer to the expense of border



APPLE ALFRISTON.



PEAR DOYENNE D'ALENÇON.

making, concreting, and draining, if he had reason to think that the soil in question would grow good fruit.

Vine Borders.

A mixture that has given me excellent results for Vines, both permanently planted and in pots, is composed of ten cartloads of good fibry loam, one cartload sweetened horse droppings prepared by frequent turnings, two of wood ashes, three of lime rubble or old mortar rubbish, 5 cwt. of bones, 3 bushels of soot, and 1 cwt. of a thoroughly well proved Vine manure, such as Thomson's or le fruitier. For Peaches and Nectarines, ten loads of loam, four of lime rubbish, and two of wood ashes, not adding anything of a more stimulating character until the trees are carrying their fruit, and then giving it in the form of top-dressings. Respecting the wood ashes, I should perhaps have termed it burnt refuse, for although most of it was burnt woody fibre, the material really came from a garden smother. This is one of the most useful materials to the fruit grower, its gritty nature serving to keep the soil in a good mechanically divided state, while the amount of potash it contains in an available form is very considerable. When fruit borders are thinly top-dressed with it, it prevents the surface cracking over and becoming hard and dry, or wet and pasty. It is excellent for mixing with fertilisers, allowing them to be more regularly distributed, and is an aid to the production of those short bristly feeding roots that all good fruit growers delight in.—H. R. R.

(To be continued.)

The Oaks of Windsor Forest.—In Cranbourne Chase stands the largest Oak known in Windsor Forest. A measurement showed it to be about 40 feet in circumference, but it is very irregular and knotty. It is hollow, and may have existed 800 or 900 years. The veteran of the forest, however, is William the Conqueror's Oak. It is situate near Cranbourne Tower, and is open to public view. It is 37 feet in circumference, and still throws out its shoots. Its age is estimated at about 1000 years. Outside the Forest Gate at Ascot is a fine specimen of a tree of "middle age." It is about 600 years old, and is 27 or 28 feet in circumference. The finest grown Oaks are at Low Pond, just at the back of Rhododendron Walk. One is 70 feet high, and rises 40 feet before it throws out a branch; and there is a tree 100 feet high near Cumberland Lodge.

Blackberry Culture

Seeing that these prolific fruits thrive so luxuriantly in the woods and hedgerows of many British counties, the idea of cultivating Brambles systematically may by some seem somewhat absurd; but I think none can deny how delicious the fruits are when eaten in either a raw or cooked state. There are, however, two good reasons why Blackberries should be cultivated. One is, that, like all other wild fruits, they may be considerably improved by good culture, and garden-grown fruits are decidedly superior in both size and juciness to those obtained from the hedgerows. In some districts but few are found growing in a wild state, a supply from the garden is then all the more esteemed. With the above remarks, perhaps few, if any, readers of the *Journal of Horticulture* will be inclined to disagree, but I will go a step further, and advance the firm conviction that there is ample scope for the establishment in England of a profitable industry in growing Blackberries. If hybridists will take the matter seriously in hand I see no reason why, in time, we should not have a very superior race of varieties, with fruits resembling in size Sir J. Paxton Strawberries. The hedge-grown fruit would then, I think, be quickly driven out of the market. Some time must, however, elapse before such strides can be made; but in the meantime I fully believe that with the varieties we now have Blackberry growing can be made profitable.

Some time ago I was talking to a fruit-grower about the profits of Currant growing. "Oh," he exclaimed, "Blackberries realise more per lb. in the markets than Currants do." "Grow the former, then," said I. The objection the majority of people would raise to this suggestion probably is that, as so many can be obtained from the hedges, why cultivate them? My answer is that cultivated fruit would be finer, and that it would cost less per bushel to grow fruit in a plantation and gather it than to wander for miles picking wild fruit. Hazel nuts are plentiful enough in our woods, but the culture of Cobs and Filberts is profitable notwithstanding.

Suitable Soil.

Because the Bramble luxuriates in hedgerows it must not be concluded that it will succeed in any kind of soil. Where hedges grow well the soil is usually good, and as a ditch is invariably close at hand, good drainage is secured. Fairly good soil should be selected, or it should be made good by the addition of abundance of well-decayed manure, and also be deeply stirred. Heavy soils ought to have opening materials incorporated with them. A sunny position should be selected, if sheltered from cutting winds. The fruit attains a somewhat larger size, but in almost any situation the British varieties fruit abundantly. For the American varieties sheltered sites are necessary.

Various methods of planting and training may be adopted. An excellent plan is to train them to fences formed of stout posts and galvanised wire, similar to those used for Raspberries, except that for such strong growing American varieties as the Parsley-leaved and Mammoth (two of the best) the fences should be from 6 feet to 9 feet in height. The plants should then be set 4 feet apart. A fence of this kind forms an admirable boundary between two departments of a garden. Arches could also be quickly covered with Brambles, and a Bramble-covered pergola would be both profitable and ornamental. Another good method of growing the strong-growing kinds is to plant them against tall larch poles, the rows being arranged 6 feet apart and the poles 4 feet asunder.

Such American varieties as Kittatinny and Wilson's Early, as well as the British kinds, succeed well when grown in bush form, and planted 5 feet apart each way. Autumn or early winter are the best times for planting. Strong, well-rooted young plants should be obtained, and a mulching of short manure is beneficial.

Treatment after Planting.

After planting, cut the shoots off level with the ground, and the following June select two of the strongest growers and remove the others. Those retained will form fruiting canes for the following year, and in autumn will need shortening to from 3 feet to 6 feet. After they have fruited, cut them away. Each year three or four young growths must be selected to form fruiting canes, and the others be removed. In this respect the treatment is identical to that practised

for Raspberries. When the shoots have grown to the top of the trellis or stake remove the points, and also pinch off the laterals at the third or fourth joint. When practising bush culture pinch the shoots when they are from 3 feet to 5 feet in height, and when the plants have become strong, retain from four to six young shoots each season.

Like the Raspberry, the Bramble responds readily to liberal treatment. For this reason give a dressing of well-decayed manure each autumn, after pruning has been done. 3 lbs. of kainit and 3 lbs. of basic slag per rod may also with advantage be applied, after the manure has been lightly pointed in with the fork. Deep digging around the plants ought never to be practised.

Warwickshire is famed for its Blackberries, and in no other part of England have I seen them grow in such profusion. A few days ago I noticed a hedge 7 feet or 8 feet in height completely overrun with Brambles, some of the shoots being from 12 feet to 15 feet in length; and the old canes were simply smothered with delicious fruits. This wild Warwickshire Blackberry seems to me to be superior to the wildings often met with in other parts, and if crossed with the American varieties would, I think, give us an improved type. On account of the fine flavour of the berries this variety from the leafy lanes of "ancient Warwick" should, I think, find a home wherever the Bramble is cultivated.—H. D.

Pear Stocks.

The best fruiting trees are invariably established on stocks of the Pear or the Quince. For large standard trees the Pear stock is undoubtedly the best, because on it trees attain to the greatest vigour and are the longest lived. Pear stocks are raised from seeds, chiefly from the wild Pear (*Pyrus communis*). The work of raising stocks and establishing trees on them may be safely left to the nurserymen. The cultivator should simply know that when he is about to plant Pears it is important to have the trees on the stock best adapted for the mode of growth and position they can occupy. Where there is plenty of room for root and branch extension, so that no root pruning is needed, nor branch pruning save thinning and regulating select trees on the Pear stock. In gravelly and chalky soils splendid standard trees may be seen which invariably bear fruit abundantly. The long roots of the Pear stock go downwards as well as laterally, and gather food and moisture over a wide area and do not suffer in dry periods.

If the soil, however, is over-rich, the trees may at first be unfruitful, but with age and maintaining the branches thinly disposed, they will eventually bear, and continue to do so except when blossoms may be destroyed by frost or an exceptionally heavy crop weakens the succeeding year's prospects.

For the smaller forms of Pear trees, and those restricted in growth, the Quince stock possesses advantages which make it the most generally useful. The influence of the stock is in favour of a dwarf form of tree, a surface rooting tendency, and early bearing. The roots are long, but branching and fibrous, and extend in the upper layers of soil, where plenty of food, air, moisture, and warmth exist. Owing to this fruiting is more certain, while the fruit is of better flavour, colour, and size.

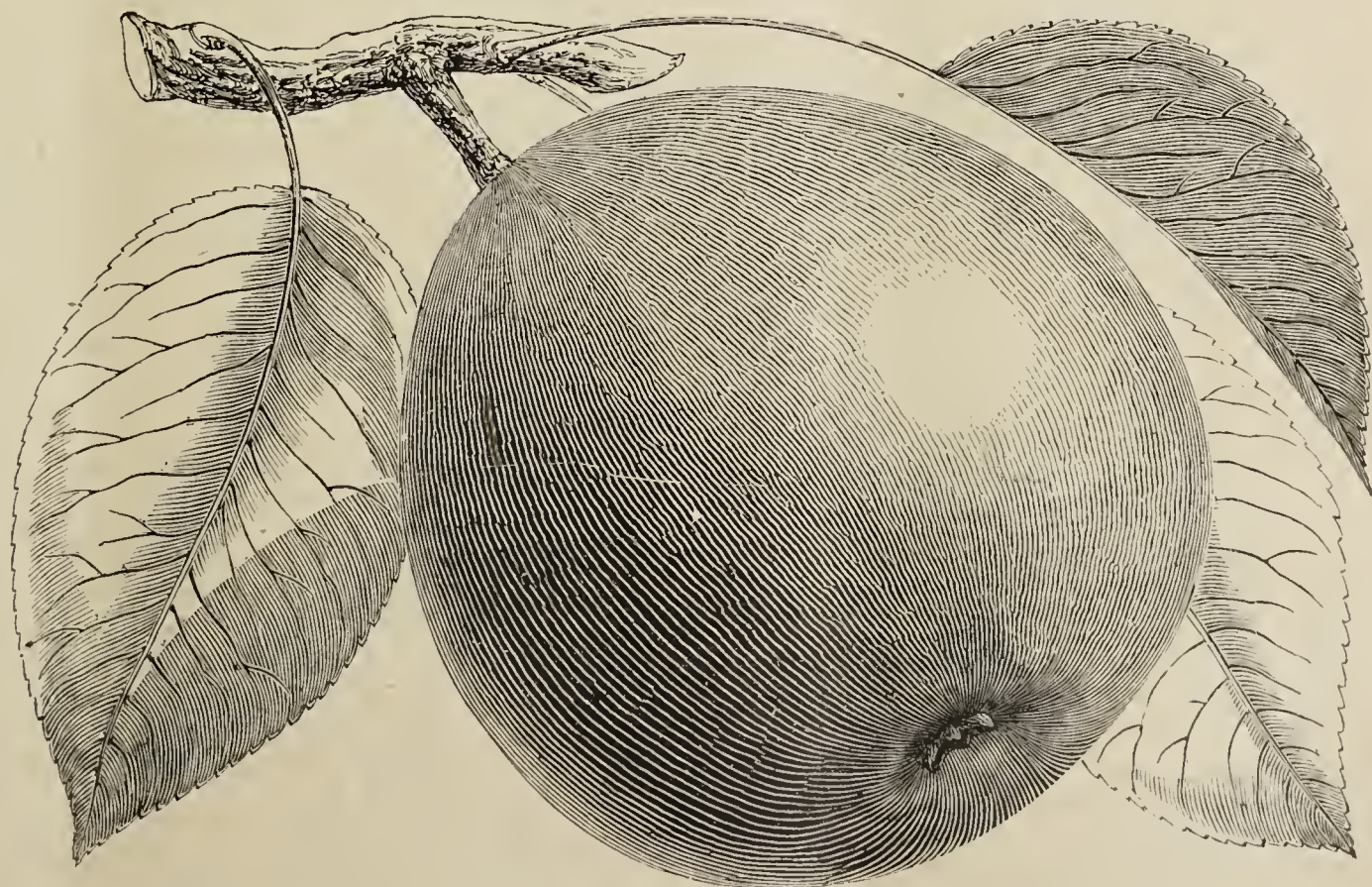
If there should be any tendency to unfruitfulness by reason of a strong rooting power, a temporary check may be given the trees by root pruning or lifting. This is an important advantage with small trees grown in a limited area, where it is a necessity that trees should remain small, or at least extend but little after their form is determined. Where the soil is naturally shallow, damp, or an unfavourable subsoil exists, Pears to succeed must be on the Quince. Attention is required to frequently mulch the surface with manure, and to supply liquid nourishment. Twelve varieties which succeed on the Quince are:—Williams' Bon Chrétien, Louise Bonne of Jersey, Doyenné du Comice, Emile d'Heyst, Beurré Diel, Glou Morceau, Marie Louise d'Uccle, Durondeau, Chaumontel, Beurré Giffard, Beurré Sterckmans, and Winter Nelis.—PRACTITIONER.

Two Good Pears.

The two varieties are those illustrated on this and the opposite page. Pear Gansel's Bergamot is fairly well known; the other variety, Doyenné d'Alençon, is seldom mentioned, yet it is without doubt a valuable late Pear. In all cold and northerly districts fine fruits of the latter can only be obtained from trees on walls, but in the South good examples are afforded by pyramids. The skin is greenish yellow when the fruits are ripe, thickly dotted all over with large dots, which are sometimes grey and sometimes green, not unlike the colouring of Easter Beurré. The flesh is yellowish, tender, buttery, and melting. It is in use from December until March. It closely resembles the variety we have mentioned, namely, Easter Beurré, but the flavour of Doyenné d'Alençon is much superior. The latter is also a noted bearer.

Gansel's Bergamot is held in high esteem by all growers of it. Unquestionably it is a variety of great excellence, the fruits being large and imposing in appearance, and of first-rate quality. Where there is a good space on a wall, Gansel's Bergamot will occupy it worthily. When the tree is older it bears regularly and well, though in a young state it is shy. To increase its fruitfulness it has been recommended to impregnate the flowers with the pollen of some other variety, such as the Autumn Bergamot.

It is generally believed that this variety was raised from seed of the Autumn Bergamot by a Lieut.-General Gansel, at his seat, Donneland Park, near Colchester, in 1768. However, the Bonne Rouge and Brocas' Bergamot, which are acknowledged synonyms of Gansel's Bergamot, were cultivated at the Broughton Park nursery in 1753, which would indicate that it was not a native variety.



PEAR GANSEL' BERGAMO.

NOTES

NOTICES

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, October 15, in the Drill Hall, Buckingham Gate, Westminster, 1-5 p.m. Papers on "Hardy Fruits for Scotland," by Messrs. Donald Maclean, James Day, and William Wright, will be read at three o'clock.

Conference on Roses.

By the kind invitation of the Earl of Ilchester, the Royal Horticultural Society will hold a Conference on Roses, together with an illustrative show of flowers, at Holland House, Kensington, on Wednesday and Thursday, June 25 and 26, 1902. It is to be noted that the dates are subject to alteration, according to the date of the King's Coronation. The Very Rev. the Dean of Rochester, D.D., has been invited to act as President of the Conference. A schedule of the exhibition has been prepared, for which applications should be made to R.H.S. Secretary, 117, Victoria Street, S.W.

New Apple "Rival."

This variety we figured last year (October 18, 1900, p. 351), and we are reminded of it at this time by a leaflet from Messrs. Clibran, of Oldfield Nurseries, Altrincham. It resulted in the hands of Mr. Charles Ross (see page 329) from a cross between Peasgood's Nonesuch and Cox's Orange Pippin. The above firm have the entire stock. The raiser describes it thus: "It is a free grower, with an upright habit, and well adapted for orchard cultivation; the fruit has a very good flavour, and is strikingly handsome, being a beautiful bright red on the side exposed to the sun. It is a good cropper." Personally we feel assured that once it becomes known, it will rapidly establish itself as being one of the leading varieties of Apple.

Contributions to our Fruit Number.

It is very gratifying to us to have had such a number of willing contributors with favours for the present number, which is especially devoted to fruit and fruit culture. Mr. Robert Fenn, our old and much-esteemed friend, was forward with hints and reminiscences of the Crystal Palace, before it was removed from Hyde Park; Mr. Brotherston came later with "A Chat about Apples;" and Mr. Petts discussed "Pears as Pyramids;" each of which will yet appear. Mr. Geo. Abbey, still as energetic as ever, prepared an illustrated article on a little known pest infesting the berries of Grapes, which had been sent to us by a correspondent, and which we forwarded to Mr. Abbey. Mr. Traill, head gardener at Falshaw Hall, in Cheshire, and many others, contributed notes, which have given us much pleasure, as showing the continued good feeling in, and pride for, "our Journal," that has so long existed between our readers and ourselves.

The Crystal Palace.

This journal made a stout defence in favour of maintaining the Crystal Palace as a national erection at the time (1852) when someone proposed to demolish it, after the Great Exhibition. Here is a paragraph written by Mr. Fenn, which shows how forceful his expressions were:—"Can it be possible that the Crystal Palace is doomed to destruction? In whose veins does this modern Vandalism, this fearful spirit of devastation, manifest itself at the present day? Surely the mixture of primitive Danish blood, after coursing through the veins of England's sons so many centuries, should be refined ere this. Taking us as a nation, I am certain the response would be, 'Allow the building to remain!' It is a monument of native intellect. It has proved itself a blessing, and has gained the name for order, taste, and respectability, which was not supposed before to belong to the humbler classes of Britain. It is an ornament to our metropolis, and would prove itself a great good for the purpose to which it would be applied, and heartily to be desired, namely, a winter garden, which, with a lasting happy idea of the Exhibition itself, it would remain as a bulwark around the memories of the people."—*Ide* "The Cottage Gardener," April 22, 1852.

Wasps' Nests.

In a letter by Mr. Charles C. Ellison, referring to Mr. Hiam's notes in the "Readers' Views" page, September 26, he states having "harried" another huge wasp nest last week, and came to the undoubted conclusion that the supposed hornets are queen wasps, exactly as stated by our correspondent, Mr. Hiam. Mr. Ellison has caught a great number of these queens in wasp traps.

September Weather at Belvoir Castle, Grantham, 1901.

The wind was in a southerly direction eighteen days. The total rainfall was 0.94 inch; this fell on eight days, and is 1.38 inches below the average for the month; the greatest daily fall was 0.21 inch on the 20th. Barometer (corrected and reduced): highest reading, 30.219 inches on the 28th at 9 p.m.; lowest reading, 29.381 inches, on the 17th, at 9 a.m. Thermometers: Highest in the shade, 72 degrees on the 25th and 29th; lowest 35 degrees on the 2nd and 16th; mean of daily maxima, 65.50 degrees; mean of daily minima, 47.26 degrees; mean temperature of the month, 56.38 degrees; lowest on the grass, 32 degrees on the 2nd; highest in the sun, 124 degrees on the 29th; mean temperature of the earth at 3 feet, 57.30 degrees. Total sunshine, 144 hours 25 min., which is 10 hours 5 min. below the average for the month; there were two sunless days. The total rainfall for the year is now 5.09 inches below the average up to the present date.—W. H. DIVERS.

Beckenham Horticultural Society.

Syllabus of meetings, session 1901-2:—Oct. 11, "Experiments with Chemical Manures," F. W. E. Shrivell, F.L.S. Oct. 18, Library. Oct. 25, "Orchid Hybridisation, its Advantages from a Grower's Point of View," H. J. Chapman. Nov. 1, Library and exhibition of Potatoes. Nov. 8, "Sweet-smelling Plants and Shrubs," E. St. J. Tucker (illustrated with lantern). Nov. 15, Library. Nov. 22, "Bees and Bee-keeping," W. Herrod, E.B.B.K.A. (illustrated with lantern). Nov. 29, Library. Dec. 6, "The Primula" (pictorial lecture), Mr. Cox, Hon. Sec. Reading and District Gardeners' M.I.A. Dec. 13, Library. Dec. 20, "The Work of a Root," R. J. Tabor, M.A., F.L.S. (illustrated with lantern). Dec. 27, Library. Jan. 3, "Cannas," H. Cannell. Jan. 10, Library. Jan. 17, "Some Physiological Considerations in Plant Culture," H. O. Etherington. Jan. 24, Library. Jan. 31, "Celosias," H. Langford. Feb. 7, Library. Feb. 14, "Soils: Cultivation and Water Supply," A. D. Hall, M.A. Feb. 21, Library. Feb. 28, "Caladiums," R. Basting. March 7, Library. March 14, "The Improvement of Plants by Selection and Hybridisation," Professor J. Percival, M.A., F.L.S. March 21, Library. March 28, Good Friday, no meeting. April 4, "Lapagerias," W. Cousens. April 11, "Stocks: and Root Management," Seymour Deadman. April 18, Library. April 25, "Dahlias," H. W. Barnes.—M. WEBSTER, Sec., The Gardens, Kelsey Park, Beckenham.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
September and October.		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ...29	S.S.W.	deg. 54.9	deg. 54.3	deg. 73.5	deg. 47.0	Ins. —	deg. 57.7	deg. 58.3	deg. 57.8	deg. 38.0
Monday ...30	S.E.	50.4	50.3	63.5	46.8	—	57.8	58.3	57.8	39.3
Tuesday .. 1	S.S.E.	63.2	60.6	73.0	49.5	0.25	57.2	58.2	57.8	44.3
Wed'sday 2	S.S.E.	60.2	59.7	64.7	58.0	0.08	58.8	58.3	57.6	50.5
Thursday 3	W.N.W.	54.0	52.3	67.0	49.5	0.21	58.3	58.3	57.6	43.2
Friday ... 4	W.S.W.	55.4	55.0	59.7	48.3	0.27	57.5	58.3	57.6	41.0
Saturday 5	S.S.W.	49.1	47.0	57.1	39.3	0.03	55.2	57.9	57.6	31.6
MEANS ...		55.3	54.2	65.5	48.3	Total 0.84	57.5	58.2	57.7	41.1

With the exception of Sunday and the greater part of Tuesday the weather during the week has been unsettled. A thick fog occurred on the 30th ult.



Sir Joseph Paxton.



Pears, and the Raisers of Them.

Most fruit growers are aware what a large number of varieties of Pears are grown; at the same time, what a few are really worth growing, owing to either their being flavourless, shy croppers, and in some cases non-croppers! Perhaps all readers may not know that nearly all our sorts of Pears have been produced in France, Belgium, and America—scarcely any in our country. It has occurred to me that if the hybridising of Pears could be carried out in this country at the rate our Strawberries are, we should certainly have far better and more suitable varieties for our climate and soil.—A. J. LONG, Oxon.

Cracking in Pears.

"A Cultivator" asks: "What is the cause of my Pears cracking and having a discoloured skin? Some of the fruits are very bad, and are simply worthless. I should be glad to know what is the cause and the remedy." The cause of the cracking of the fruits and the discolouration is the presence of a fungus known as *Cladosporium dendriticum pyrinum*. It also attacks the leaves. The only remedy is to spray the trees with sulphate of copper, dissolving 1lb in 25 gallons of water, and using the solution previous to the blossom buds swelling. Paris green may also be used at the rate of 1lb to 260 gallons of water. The water should, however, be made milky by making some thin whitewash with quicklime. The mixture must be sprayed on the tree several different times, first before the flowers expand, as soon as the fruit is set, again in three weeks, and a last spraying at the end of the next three weeks. The trees ought, if not too large, to be lifted and replanted, working some better material among and under the roots. Should the position be ill-drained, some provision must be made to improve it in this respect, as insufficient drainage is a great cause of Pears becoming unhealthy.—E.

The Loganberry.

I look upon this as a valuable addition to our hardy fruits, more especially for jam making; the fruit being too juicy and soft for travelling. The plants I have growing here on a gravelly subsoil have borne well this year, though on rather weak growths. After the first year's planting the bushes only grew about 3 feet high, but from this growth they produced quite a pyramid of large, luscious fruit, similar to a Raspberry, but more conical, and of a distinct Blackberry and Raspberry flavour. I had sufficient quantity to preserve, and the Blackberry flavour is more pronounced in the jam than in the ripe fruit. This year the plants have made growths 10 to 12 feet, and are still growing, the wood being extra stout, with leaves and growth like a Blackberry and spines on the wood like a Raspberry. If the new wood fruits as the smaller old wood did, it will be an extraordinary prolific fruit.—C. ORCHARD, Bembridge, I.W.

Bothydom.

"Do gardeners consider the comfort of the bothy as they should?" I think we can safely answer this in the negative. If we were to investigate some of our foremost gardens, we should in most cases, I am glad to say, find bothies of fine appearance, and well adapted for the comfort of their inmates, but although they denote comfort outwardly, it is when we look into detail that we find they lack the necessities which young men most appreciate. Few gardeners furnish their bothies in such a manner as will induce the bothy-men to look forward for the long winter nights being spent, under the bothy roof, in comfort. There seldom is any provision made for quiet study. How few bothies have a library of horticultural works, and how often is the suitable corner for study devoted for some less useful purpose.

Where the bothy is so little considered, young men are glad, and rightly, to spend as little time as possible where their needs are not heeded. On the other hand, in bothies that are well provided for, more interest is taken in the work, and the men are more anxious for self-improvement. I have known young men of fine promise turn to some other profession only

because they have been disgusted with their bothy life. Too often gardeners employ unsuitable labour for the bothy, and seldom trouble to see if all is kept comfortable. There are bothies, on large establishments, where furniture and most ordinary requisites are far from being sufficient for the bothy-men's needs, and the employers of these men are under the impression that they are provided with all their common wants. If such a state as this exists, and it certainly does, how can we wonder at the scarcity of good journeymen?

Many gardeners forget how their men try to meet their heads' demands, often by working long after regulation hours, and for all this gratis work they naturally expect some little consideration, and in nowise would they appreciate it more than by a little more thought and money being spent on the bothy.

I hope head gardeners will soon wake up to the fact that the bothy needs a greater share of their thought than it gets at the present.—JUNIOR.

Young Wood v. Old for Mrs. Pince Grape.

It has already been frequently asserted that to produce good-sized bunches of this high-class late Grape, it is necessary to fruit it on the young wood. A striking proof of the correctness of this assertion, in one instance at least, has occurred with the one Vine of this variety under my charge, and which is here illustrated in a bearing condition. It has been planted something over twenty years in our latest house, which is filled chiefly with the varieties Alicantes and Lady Downe's. The Vines break naturally with ventilation open front and top. In the event of a spell of cold weather setting in, a little heat is turned on.

During the past three or four years the rod of Mrs. Pince has almost failed to show fruit at all on its entire length of 20 feet; excepting one or two small bunches it has always been spur-pruned, and wood and foliage are most healthy and vigorous.

The old rod, too, has become unsightly as well as unfruitful, through my having at times left four and five eyes at pruning time on some of the spurs to induce fruitfulness. A year or two ago I left a piece of new wood 3 feet 6 inches in length, which carried three bunches of about 3 lbs. weight each. Having been successful in getting a good strong break from the bottom of the rafter last year, I at once decided to cut out the old rod if all went on satisfactory, which, fortunately, was the case. The young growth was stopped at 6 feet and shortened to 5 at pruning time. This year the old rod only produced four bunches, two of which appear in the photograph, while on the young cane, with the exception of one or two of the lower ones, every eye contained a bunch. This amply demonstrates the superior fruitfulness of the young wood as compared with the old. The three illustrated were allowed to remain, and weigh, respectively, 4 lbs. 2 ozs.; 4 lbs. 1 oz.; 4 lbs. 2 ozs. Total for the three bunches, 12 lbs. 5 ozs.

For the variety they are well coloured, looking almost as blue as Alicantes and Lady Downe's in the same house. No trouble was experienced with their setting, as they set as freely as Hamburgs in the earlier houses. The border in which they were growing had a fair dressing of bonemeal and wood ashes well forked in when the Vines commenced to break, and were frequently watered with liquid cow manure. One or two dressings of Canary guano were given to the Mrs. Pince when taking their last swelling, which I am inclined to think materially assisted them in finishing so well.

The old Hamburg noticed in the Journal issue of October 25th last year, and from which the Editor illustrated a bunch weighing over 6 lbs., has this year produced several good bunches, the heaviest being slightly over 4 lbs.—W. H. WILSON, Moor Hall Gardens, Stourport.

To vouch for the truth of his statements regarding the weights of the bunches, Mr. Wilson asks us to append the following certificate:—"I have much pleasure in stating that I was present when the above bunches of Mrs. Pince were cut and weighed, and can certify that the weights given—viz., over 4 lbs. per bunch, are correct. I have repeatedly seen them during their period of growth, and have noted their progress with much interest. I should like to say that the colour and general finish of the bunches is of the highest order, exceeding my most sanguine expectations."—(Signed)—ARTHUR COMBES, F.R.H.S., St. Mary's Nursery, Hagley, near Stourbridge.

September 30th, 1901.

Among the Grape Thinners.

In the horticultural, and sometimes in the daily press, there appear regularly each year, at the end of April or the beginning of May, sundry advertisements from various large nurserymen, asking for Grape thinners—previous experience not necessary. This last clause is the one that attracts the eye of the forlorn seeker after work, and of the still more forlorn individual who regards an occasional job as a kind of terrible necessity to be gone through by way of penance for being born in a state of civilised society. Hope springs again in the bosom of the unfortunate wight who was too old for his particular occupation at forty, and has grown no younger at fifty; the fourth-rate solicitor's clerk without a reference counts his pence and betakes himself to the railway terminus; the broken-down lawyer or doctor who has given way to drink, and whose practice has in consequence given way also, considers if the fleeting remnants of his last white shirt will bear yet another starching, while the superior tramp forsakes the luxuriant accommodation of a cheap lodging-house, and girding his all to airy habiliments about him, is on the road at break of day, in the prospect of earnings sufficient to replenish his wardrobe for the season.

For the purpose of studying human nature in its various aspects, nothing better could be desired than to work among the motley assemblage of Grape-thinners gathered at some large nursery in the late spring and early summer. Here may be met all sorts and conditions of men—those who have started near the top of the ladder and come down in the world, those who have started at the bottom and stopped there ever since, respectable artizans out of employment through no fault of their own, canvassers, and counter-jumpers, men of doubtful occupation, and "knights of the road," who, without doubt, during the greater part of the year follow no occupation at all. Many of them have never seen a Grape Vine before, and some of the Grape Vines will not benefit by their attentions. but regular nursery hands are scarce during thinning time, and the shrewd Grape grower knows that a minority of them at least will soon become sufficiently expert with the scissors to be worth keeping till the end of the season.

But much as they vary in most particulars, it is somewhat remarkable that the greater number of them possess one striking characteristic in common, in that they appear to cultivate a fine healthy thirst, and their persistent, though not over-successful efforts to assuage the same with liquor of an alcoholic nature are deserving of the highest commendation. It would scarcely be an exaggeration to say that some of them know as little about Grapes as the Grapes know about them, though not all will admit it. A few years ago an opportunity was afforded us of seeing one individual appear armed and equipped with a weapon resembling a broom-handle with a butcher's knife tied on the end, fully prepared to thin Grapes, forests, wild beasts, or anything else with a vengeance; another innocently inquired if they were expected to find their own shears, and was sarcastically told—no, but they would be supplied with knives and forks,

while another tendered the information that he was constitutionally nervous, and had not been used to climbing high ladders, imagining, perhaps, that vineries were erected on the Eiffel Tower principle. One boisterous would-be thinner, on hearing the foreman's peremptory question, Had he ever done any thinning before? made haste to assert that he had already worn out two knives at it since Christmas, and wondered why the foreman stared on learning of this new and novel method of thinning very early Grapes.

There is an old story, which goes the round of most vineries during thinning-time, of two men, who, after practising on a few spare bunches hung on a string to get their hands in, proceeded to cut all the bunches off the Vines and hang them on strings to thin in the same manner. It may not be true, but after a season's experience among this class of Grape thinners, it is not so difficult to believe. Of the promiscuous crowd with which one comes in contact at

such a time, there are a few who will always live in the memory as being remarkable for some peculiarity or other. One of the first to arrive during this particular season was the "General." He was called the General, though there was nothing of the army about him, unless a pair of immense side-whiskers, a huge grey moustache, a rubicund countenance, and an air of the utmost ferocity, could be considered military. He might have been a Russian noble or a Turkish brigand, and would have looked more at home wielding a scimitar or a broadsword than a pair of Grape-scissors. His aspect was awe-inspiring and lion-like, but in reality he was as gentle as any lamb. He spent most of his time in apologising in meek and genteel tones, for some imaginary shortcoming or mistake. He apologised to the hand in charge for not knowing how to thin, to the man who sharpened his scissors, to all his fellow-workmen, to the boys and labourers, and everyone agreed that he was a most polite man. But somehow, in spite of his expressed anxiety to learn, and his oft-repeated desire not to give trouble, he did not seem at home at his new calling; it appeared as



MRS. PINCE GRAPE.

though some irresistible fate compelled him to cut off one point berries and leave the inside ones; nothing would shake his conviction that whatever he left on, it was absolutely necessary to strip all the berries from the tops of the shoulders, and no effort on his part could prevent his wayward scissors from systematically pricking all the berries he left on the bunch. In despair, he was at last sent to weed the Vine border, at which he expressed his delight, and his determination to weed it as it had never been weeded before. But, alas! the spirit may have been willing, but the flesh was certainly weak, for half an hour later our gentle General was discovered, seated on an upturned basket, surveying the weeds as though they were a regiment of soldiers, and he the officer at whose command they would all uproot themselves as one plant.

Then there was the "Physician," a pale-faced individual with a voice so mournful in its tones that he might have been continually engaged in reading the Burial Service. His pronunciation and accent was gentility itself, and there was a pervading air of wistful reminiscence about the man which made one feel instinctively that his thoughts were always

wandering back to the past, when he practised on human beings instead of the fruits of the Vine, and found it a more congenial occupation; only we hopefully trusted that he never, in all his surgical experience, made such sad havoc of anybody's anatomy as he made of certain bunches of Black Hamburgh. What had brought him down we could easily guess, as we observed him stealthily take a small flask from his coat-pocket, and marked the look of intense gratification overspread his features as he applied it to his lips. Had he taken fewer doses himself from that small bottle he might still have been dosing other people.

But perhaps the greatest aristocrat whose mind lightly turned to thoughts of Grape-thinning that season was a black-bearded gentleman who appeared in a tall hat and a long frock-coat, articles of attire which he was with the greatest difficulty persuaded to doff, even when the thermometer stood at 90 degrees. What he was, or had been, he did not say; but he carried a lawyer's brief bag, which earned for him the nickname of the "Solicitor." If he was a solicitor he would have been a very poor one to trust affairs to, had he managed them as awkwardly as he did the few bunches of Grapes which were the first and last he thinned, or rather hacked out of recognition. In a competition for the worst possibly thinned bunches his would have been easily first. He was hopeless, and eventually was detailed off—tall hat, frock-coat, and all—to crock pots for Tomatoes, a job for which he looked about as eminently unsuitable as could be. But if there are some for whom our pity is excited at the misfortunes which have caused them to stray so far away from their natural sphere, there are others who cannot but cause us satisfaction that they should do a little honest work for once. Such was the "Tramp," a ragged individual of sombre visage and unwashed countenance, who gained his cognomen by remarking that he had always had a strong prejudice against railway trains, and of late years had always walked wherever he wished to go. Judging from his appearance, it was not difficult to believe that he was, indeed, a great traveller. He could thin with remarkable skill when the foreman's eye was upon him, and could do nothing with equal ability when nobody was by. He said he did not intend to adopt that work as a permanent occupation, but only meant to keep at it long enough to be able to purchase a new coat, and he idly inquired (not that he had any personal interest in the matter) whether there were any marine store dealers in the locality. He sadly wanted a new coat, though it might have struck some people that a previous purchase should be a piece of soap.

One day he appeared in a new coat, a coat of a fine, full flavour, and we judged he had found that marine store dealer, and was not long for the vineries. He seemed to have a vague idea that there was something not quite right with his new outer garment, for he explained that he had accidentally upset some paraffin oil over it. A peculiarly virulent brand of paraffin it must have been, like no other paraffin on earth. He had plenty of room to work that day, nobody molested him; had the marine store dealer provided him with a barrel of dynamite he could not have safeguarded him more effectually. He did not appear the following day, and only the flavour of that coat lingered in the vinery to remind us of him. Whether he took it with him, or whether the odour of it proved sufficiently powerful to waft him away to other regions remained a mystery.

There was another man, too, who did not take up Grape-thinning as a means of earning a livelihood, but went in for it just as a pastime. A monied man he was, who looked on this as the best way to spend a pleasant holiday. For years past he had lived a life of idleness, spending thousands in the wildest dissipation, and he was ready to spend thousands more. He was merely doing a little work for a change. In view of these statements it certainly struck some of us as odd that he should never neglect an opportunity of borrowing small sums, and that he had such a shocking memory where paying back was concerned; but perhaps this was because he had only been accustomed to handling very large amounts. These and many more provide the gardener of thoughtful disposition with much food for speculation, and some amusement; but for all that, without this temporary reinforcement of his regular staff the nurseryman would often be hard put to it to prevent his Grapes from spoiling.—A. W. D.

Gadding and Gathering.

"Here awa', There awa'."

Fruit Trees at Southfields.

For years past Messrs. Veitch and Sons, Ltd., tenants of the nursery named Southfields, near by Fulham, in London, have seen the steady approach of line upon line of dwelling-houses around the above-named property. So near have these now come that only one side of the Southfields grounds is left unbuilt upon, and the reason for this is that here there runs a roadway beyond which the builder has not yet thrown his bricks. Being surrounded in this way, it has at last been rendered imperative to transfer the growing stock from this Fulham branch away out into the open and sunny country, free from London's smoke, and almost free from its most unwholesome fogs. As is now well known, the new nurseries planned by Messrs. Veitch, are situated at Feltham, in Middlesex, and within forty minutes run or less of Waterloo Station. Visitors from the north side of London would probably be best advised to first make for the Central London Railway, and then by tram to Kew Bridge Station, where trains run upward to Feltham. No planting has been done at Southfields for the past two seasons at least. Young stock is all being raised at the large Feltham nursery. What remains at Southfields will be removed before a year passes.

At the present time one may see some exceedingly well-trained fan-shaped Peach and Nectarine trees at the latter place. Outdoor pyramidal Peach trees are quite a speciality here, and sure enough there exists a splendid selection to draw from. Small-sized, or full-sized, for the immediate filling of large spaces, or for expansion over an area within a period of years, the grower may find what he desires in the grounds at Southfields. Extraordinary care is exerted in the training of all manners of fruit trees, but most particularly on trees for walls or for indoors. The usual cross-canies are not thought sufficient to insure perfect straightness; additional lacing is provided wherever a shoot shows the least deviation from the line it ought to follow. The gridiron and candelabra methods of training are infrequently adopted in these days, but for the sake of the few who still patronise this form, a sufficient number of trees thus trained are found at Southfields. Altogether, there are nine acres of trees and bushes. Mulberries occupy a certain limited area; Pears, Apples, and Plums are also represented, each in one or other of their popular forms, as pyramids, standards, cordons, horizontal, and fan-shaped.

Plums.

In the present fruit issue there is no list of Plums afforded, and here may I come to the aid with a few names? The following are all superior varieties, and suitable for all classes of gardens and gardeners:—Archduke, Belle de Louvain, Blue Gage, Brandy Gage, Bryanston, Green Gage, Coe's Golden Drop, Czar, Denniston's Superb, Diamond, Early Prolific, Early Transparent Gage, Golden Transparent Gage, Grand Duke, Green Gage, Ickworth Impératrice, Impériale de Milan, Jefferson, Jodoigne Gage, Kirke's, Late Transparent, Lawson's Golden Gage, Monarch, Orléans, Ouilon's Golden, Pond's Seedling, Prince Englebert, Reine Claude de Bavay, Reine Claude du Comte Hathem, Reine Claude Violette, Transparent Gage, Washington, White Magnum Bonum, and Wyedale. For a description, and for hints relative to each of these, I must ask the reader to consult the fruit-growers' catalogues. Under "Outdoor Peaches," on another page, will be found a list of the varieties found suitable for this purpose at Chiswick. To this list might be added Amsden June, Early Silver, Late Devonian, Sea Eagle, and Violette Hâtive, which are good varieties, though I do not indiscriminately advise the planting of them out of doors.

Figs, Oranges, Apricots.

The collection of Figs in pots is a very fine one; in fact one may be allowed to say that few such complete lists of varieties exist elsewhere. The bulk of the plants are in 8in pots; some are grown as standards, but most are of the ordinary, dwarf, bushy type; others are for trellises. Oranges for pot-fruiting are likewise numerous. In the open quarters were Apricots, though these were a scarce quantity. Plants for spring forcing, such as Deutzias, Viburnums, Azaleas, Prunus in variety, Cerasus and Pyrus, are all liberally arranged. In ground that had been cleared were large beds of the Lilywhite Seakale, and also of Asparagus for spring or autumn planting. The Seakale furnished a splendid show, and all who have grown the Lilywhite variety know how superior it is over the ordinary Seakale. The collection of herbs for pot use is embracive, and includes Golden Thyme, which seems to have become so scarce in many nurseries. The stock of pot Ivies and Ampelopsis is unsurpassed.—WANDERING WILLIE.

Outdoor Peach Trees.

The healthy and handsome pyramid, or bush, Peach tree figured on this page has been trained under the direction of Mr. S. T. Wright, superintendent of the Royal Horticultural Society's gardens at Chiswick. The tree is one of about thirty or so that are growing in a sheltered area between a span-roofed Muscat vinery and a cottage, near the entrance gates. The trees are attended to with the usual amount of consideration, but I do not suppose they receive any pet attention. Yet here we see a bush than which nothing finer could be either desired or produced. At the time when the photograph was taken, in early September, the subject illustrated bore a heavy crop of average sized fruits. Many of these can be seen by inspecting the branches, as reproduced in the illustration.

Where sheltered spaces exist (and where do they not?) in gardens, may not the Chiswick lead be followed in the matter of planting bush Peach trees for open air culture? In the South the practice is all too scarce, and yet with moderate care a fair return of luscious fruits could be regularly ensured. Besides Peach Dr. Hogg, there are, in the Chiswick outdoor collection, the varieties Early Ascot, Grosse Mignonne, Early Crawford, Rivers' Early York, Early Alexander, Hale's Early, Dymond, Pineapple, Elruge, Crimson Garlande, Belle de Doué, Early Beatrice, Early Albert, Early Alfred, Goshawk, Alexandre Noblesse, Early Louise, Condor, and Waterloo. The best Nectarine appears to be Early Rivers; others include Balgowan, Murray, Lord Napier, Advance, and Pineapple. Most of the trees are growing vigorously, and all are clean and perfectly free from disease or pests. A few have made too rampant growth, resulting in unfruitful wood; but the proper cultural practices will be employed to check this exuberance. At any rate, outdoor Peaches as bush trees are demonstrated to be one of the most successful features of fruit culture in the Royal Horticultural Society's gardens at Chiswick.—J.

Our next number will contain a full and interesting report of the Crystal Palace Fruit Show, and will be illustrated with fruit subjects.

Perpetual Strawberries.

A story used to be told of an enthusiastic lover of Strawberries that he went down to Cornwall in spring, and then followed the Strawberry north to Aberdeen, as the birds of prey are said to follow the lemmings in their migration in Sweden and Norway. This is not necessary now, seeing anyone may have Strawberries every day from June to November. Many new Strawberries are issued every year, but they have no interest for me; I would not have had Messrs. Laxtons' new variety even if they had offered it this year. For I am not a rich man, and my garden is small, and I

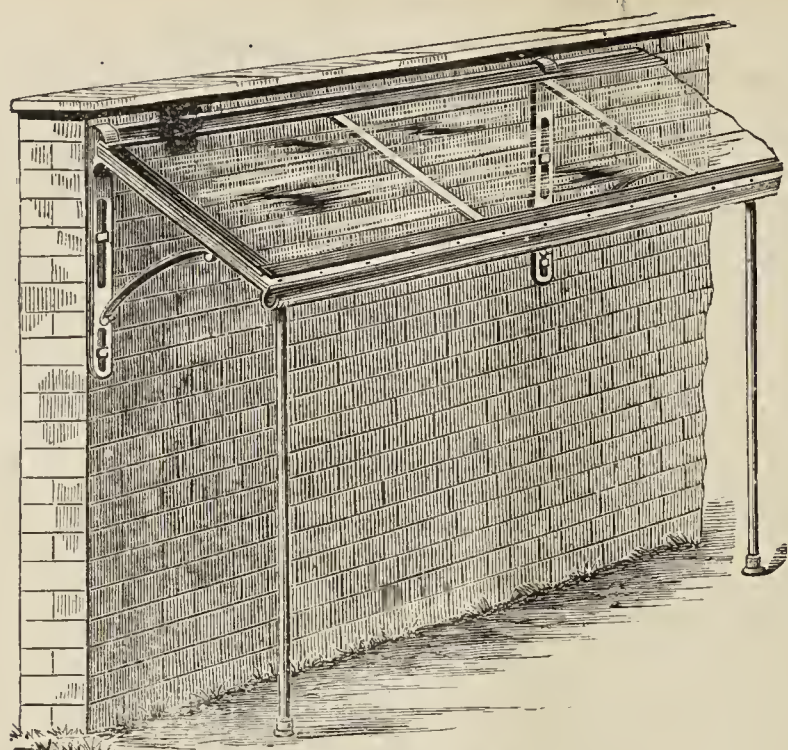
require a good deal of rent and return from the flowers and fruits I give board and lodging to in my garden. My old friend, Mr. Camm, some time ago wrote some capital papers on Irises in the Journal, and exhorted gardeners to grow them more; but I cannot afford space for plants which will give me a return for one week only in the fifty-two, and take up room where other things may be grown which yield a longer return. Iris Kämpferi, which does well in the damp edge of my pool, is an exception to this. So my principal flowers and fruits are Roses and Strawberries from June to November, Violets and Apples from September to April. Of course I have some other flowers and fruits, but always give preference to those which give the longest return.

Last year, as I stated in the Journal, I

gathered a dish of Strawberries (it was sometimes a small one) every day from mid-June to November. This year I have more plants, and have not only gathered a dish every day out of doors from June 6th, but during September have been able to give a good dish away as well, almost every day; for St. Joseph Strawberry fruits much more freely, and has much finer berries in September and October than in August. My mode of culture has been as follows: Strong, well rooted runners with a good ball of soil are planted from the open ground for new beds, as early as possible, July if I can manage it. Firm ground that has not been dug for some months is selected; 2 feet from plant to plant is allowed, and 4 feet from row to row. They are hoed and watered, of course, as may be required, and all runners and flower trusses are suppressed as soon as



PEACH DR. HOGG, GROWN IN THE OPEN AIR.



A GLASS COPING.

formed. Liquid manure is sometimes supplied in the winter as well as in the spring. When runners begin to grow in the spring, about seven are allowed to each plant, three on each side and one in the middle, and when once these are all in position, with a piece of tile or stone to prevent their moving till they are rooted, all further runners from main plant or early rooted runners are pinched off as soon as visible throughout the season. If the plants are weak, or one has summer berries as well, it may be as well to pinch off the first crop of flowers; but I have not found the plants so treated more free with their fruit in the autumn than those which perfected a first crop, and remember, these perpetuals are the earliest and the hardiest of all.

Pinching the runners is done in July and August, while gathering the fruit. In September and October the number of flower trusses produced is extraordinary from the main plants and the runners, and the crown fruit of the latter will be found very fine. Few runners are produced during these months. I have tried doing without strawing the beds, as the runners are not so visible among the straw; but find it advisable, in spite of wire supports, to bed with straw as usual as soon as the first selected runners have rooted. In November the old plants (though they are only eighteen months old) are taken up, and any of the other runners, forming new broad rows, which look weak from having come into bearing too early. The remainder are left for one more season, during which they will not be allowed to form any runners, and then the bed will be destroyed. During September the main plants should be well thinned of exhausted trusses and dead or dying leaves, as light and air are most essential for the fruits, which will not colour if hidden under foliage.

I have tried three varieties—St. Joseph, La Constante d'Automne, and St. Antoine de Padue. The fault of St. Joseph is that the fruits are small. The crown fruits on this year's runners are quite large enough, but a very large proportion are certainly too small. It has also a bad habit, even in July, of colouring only on the exposed side, so that to get them properly ripened they should be turned, which is a nuisance. The flavour is rather sharp, which I find appreciated by most of my friends, though not by myself. La Constante d'Automne is very like St. Joseph in most particulars. The crown fruits of the year's runners are nearly, if not quite, as large, it colours better, and the flavour is decidedly sweeter and less "brisk," a favourite euphemism for the acidity that gives me the gout and many ladies nettlerash.

St. Antoine de Padue is different in many respects. The foliage and fruit are much larger, and the latter are quite differently shaped, with deeper colour and less acidity. My anxiety last year, when I had out few plants, was whether it would be as free in the autumn as St. Joseph. I can now say that the main plants are nearly as free, but the runners of the year are not. A considerable proportion of them will not form flower trusses till late in September, and some not at all, and I think that even from the main plants we shall not be able to get as much fruit in October as from

St. Joseph; but they bear well in August and September. I think, therefore, that better results for the season could be had from St. Antoine by putting the rows closer together and allowing no runners. I am pinning my faith to St. Antoine, and am giving up most of St. Joseph; I have even planted three of my Rose beds, for a change, with the former.—W. R. RAILLEM.

Glass Coping and Glass Shelters.

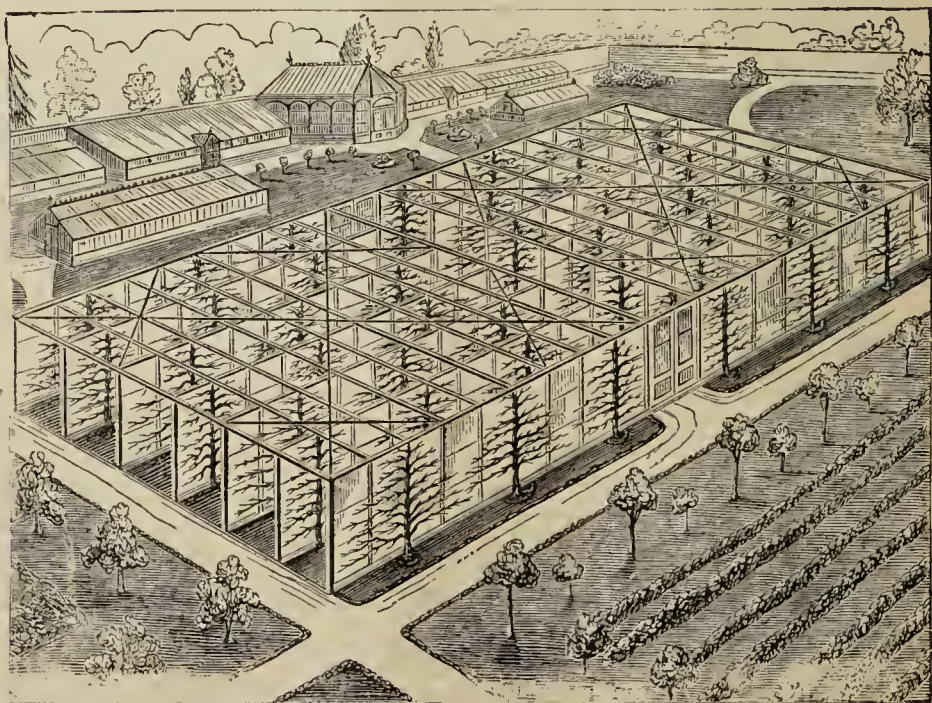
The simple illustrations which we furnish of a glass coping, and a rectangular glass shelter, may be acceptable to our fruit-growing readers. The glass coping affords a plan easy to follow, workable, and at once strong and serviceable. After the discussion in the "Readers' Views" page regarding the greater suitability of fixed versus removable copings of this nature, those who followed that argument will, no doubt, have clear views as to what is most accommodative and best for their purpose. We should like to see many more glass copings in gardens throughout the country, especially the northern parts, because without such overhead protection the success of certain fruit crops is very precarious indeed. Both designs speak very clearly of their purpose, and anyone wishing to pattern after them ought to have no difficulty whatever.

The plan of a glass shelter at the right-hand bottom corner of the page is, doubtless, novel to most "Journal" readers. The idea was propounded many years ago as a means of sheltering trees against the cutting force of cold winds. The proposition does not appear to have been in the least effective. However, as something to think over, we offer the idea on the present occasion, yet trust that we may not be deluged with criticisms or queries!

Plum Reine Claude du Comte Atthems.

In the above we have a comparatively little known Gage Plum, though it is not entirely a novelty. The tree illustrated was photographed in the Royal Horticultural Society's gardens at Chiswick, where Mr. Wright has also a number of very handsome pyramidal trees of the same sort. This summer the variety, both as a pyramid and fan-shaped on walls, bore prolifically. We had intended to secure a representation of the bush, or pyramidal specimens, but our photographer was unable to obtain a suitable reproduction.

There seems to be slight confusion in regard to its name. We have adopted the first name used by Messrs. Rivers and Son in their catalogue just published. It is also named Reine Claude du Comte d'Altham, and at Chiswick, we believe, the latter part of the name, or title, is "Hathem." The fruits ripen about the middle of September; are freestone in character, of excellent flavour, and are produced freely on young and healthy trees. Those who have grown it for some time speak most highly of it; it but lies with others to give it a trial.



Death of Mr. Martin Hope Sutton.

By the decease of Mr. Martin Hope Sutton, which took place upon Friday, October 5, both horticulture and agriculture recognise the loss of a conspicuous personality, and the town of Reading mourns the absence of one who figured not merely as a promoter of its wealth and industries, but as an active agent in all local undertakings of benevolence. Mr. Sutton, who was born in 1815, had attained to the age of eighty-six. His long life was one of the ideal old-English type, in which energy, usefulness, enthusiasm, and calm beneficence were blended with the sound business instinct from which all great enterprises spring.

It was Mr. Sutton's love of botany and Nature that first led him to induce his father to combine the business of a corn merchant with that of the nursery. This happened in the year of the accession of Queen Victoria (1837). Five years later John Sutton and Son were joined by the second brother, Alfred, when the firm took the title of John Sutton and Sons, which it has since borne, and which is sufficiently well known not only among readers but in many places where the "Journal of Horticulture" is never likely to penetrate. Mr. Sutton's father had made an unlucky start in life owing to the loss in a bank failure of the fortune left him by his father, but none who know Reading and the neighbourhood can doubt that in the end he was amply compensated by his sons for his early trials and disappointments. Amid much else the efforts of Mr. Martin Sutton were especially directed to the improvement of root-crops and the development of pasture-lands by the amelioration of grass-seeds, for which the country is greatly indebted to him. He was the recipient of repeated recognition from Prince Albert and members of the Royal Family, and in December, 1890, having then retired from active business for some two years, enjoyed the distinction of a visit from King Edward VII., accompanied by the Dukes of Cornwall and Connaught.

Societies.

National Chrysanthemum, October 8th, 9th, and 10th.

The opening exhibition of this society was held on the middle days of this week (Tuesday, Wednesday, and Thursday) within the Royal Aquarium, London. The fact of the Crystal Palace Fruit Show falling on Thursday, the 10th inst., did not appear to have in any way lessened the success of this Aquarium meeting. Collections of fruit were staged both by Messrs. J. Laing and Sons, and by Mr. H. Berwick, of Sidmouth Nurseries, Sidmouth. Most of the Chrysanthemum specialists had exhibits, as our brief report denotes; while the usual local growers supported the competitive classes. Mr. H. Deverill, seed merchant, Banbury, on this occasion offered substantial prizes for exhibits of his pedigree Onions and other choice vegetables, which induced the best growers in the kingdom to enter the lists. All the vegetables were handsome, and particularly so was Mr. E. Beckett's first prize collection. The decorative classes in the Chrysanthemum exhibition seemed stronger than heretofore.

Competitive.

Class 1 was a group of Chrysanthemums and foliage plants arranged for effect over a superficial area of 72ft. Here Mr. E. Dove, gardener to E. J. Wythes, Esq., of Bickley Hall, Kent, beat Mr. W. Howe, who superintends the gardens of Lady Tate, Park Hill, Streatham Common. There was nothing remarkable about either of the groups, though the plants were of average quality.

Mr. Norman Davis, Chrysanthemum Nurseries, Framfield, Sussex, secured the premier position for twenty-four Japanese blooms, in eighteen varieties. His flowers were massive, and, on the whole, even, including Sir H. Kitchener, Lily Montford, Edith Pilkington, Mrs. Darby, Madame Gustave Henry, Scottish Chief, Snowflake, Phœbus, Baden Powell, Charles Langley, Soleil d'Octobre, Mutual Friend, Mrs. G. Mileham, Edith Tabor, Madame Von André, Henry Weeks, and Florence Molyneux. The second prize was won by Mr. Charles Penford, gardener to Sir H. Fitzwygram, Leigh Park, Havant, with a set of splendid blooms. Edith Tabor was notably fine. Alice Byron also stood out prominently, as did Florence Molyneux and Mrs. Coombe. Mr. W. Meredith, Stanstead Park Gardens, Emsworth, led in class 3 for twelve distinct Japs. Mr. W. Ring, gardener to J. Warren, Esq., Capel House, Waltham Cross, followed as a close

second; and third, Mr. A. MacKay, gardener to F. H. Bowden Smith, Esq., Danesbury, Benico, Hertford, also with fair blooms, though not quite expanded. Mr. J. Brookes led for the half-dozen blooms, distinct, beating Mr. G. Impey and Mr. S. Foster, who followed in this order. For twelve bunches of early-flowering pompons in at least eight varieties, the premier award was annexed by Mr. L. Turk, whose collection, however, was far from impressing one with delight. For a similar entry, but with half as many varieties, the winners in order were: Messrs. E. F. Such, D. B. Crane, and L. Turk. In class 8, Mr. J. Kirkwood, Grass Park House, Finchley, secured the lead; as did Mr. J. Brookes in the succeeding class, which sought for one vase of yellow Japanese blooms. For a like exhibit of a white variety, Mr. J. Impey took first, and Mr. Norman Davis second.

In the two classes (13 and 14) for early-flowering Chrysanthemums the foremost prizemen were Mr. J. H. Prince, 11, Fennel Street, Loughborough, for the twelve bunches, distinct, followed for the second place by Mr. E. F. Such, of Maidenhead. The first set here was exceptionally fresh and strong. Mr. D. B. Crane, a London amateur cultivator, led in class 14 for six ditto; second, Mr. J. Brookes, from Totteridge Park. The decorative classes we have already referred to as being very cheerful and a most welcome adjunct to the show. The practice of using berried plants, such as Asparagus, Symphoricarpos racemosus, Iris foetidissima, Crataegus pyracantha, and other subjects, along with plants possessed of highly coloured foliage, as, for instance, Ghent Azaleas, Acers, and Golden Elder, also the hairy seed-vessels of the Traveller's Joy, is becoming, or has already become, very popular. When tastefully arranged there is nothing but encouragement to be advanced for these efforts. The chief winners here, without going into details, were Miss C. B. Cole, F. W. Seale, E. F. Such, and D. B. Crane. Messrs. Turk, Foster, and Brookes stood so in class 21, for a vase of Chrysanthemums suitable for table decoration. Azalea foliage, berried Asparagus, and Ferns (Maidenhair and Nephrolepis) were utilised in Mr. Turk's vase.

The amateurs' classes were few, but certainly well supported, and capital blooms were shown. For twelve Japanese blooms in as many varieties, the first honours were captured by Mr. J. Childs. In the next class, for six blooms of the same, Mr. J. Rayment led, and Mr. J. Childs came second.

[For lack of space this week we must omit the succeeding classes, which, however, were less important.]

Deverill's Prizes.

Annually, Mr. Henry Deverill offers prizes here for vegetables. The Onions, as usual, were very handsome, though, perhaps, better samples have been seen on former occasions. In class A, for six Onions of the variety Banbury Tankard, the first prize was allocated to Mr. E. Beckett. For the same of The Aristocrat Onion, Mr. W. Pope, Highclere Castle, secured first place. Mr. J. Bowerman, Hackwood Park, Basingstoke, was foremost for a dozen of the Ailsa Craig variety, and massive bulbs they were. A like position was filled for six ditto, by Mr. R. Lye, gardener to Mrs. Kingsmill, Sydmonton Court, Newbury; five entered. For six Exonian Leeks Mr. Beckett beat Mr. Bowerman; and third, Mr. W. Hibbs, Barkworth, Newcastle-on-Tyne. Messrs. W. Pope, Kneller, and C. Bowerman were arranged thus for a dozen of Scarlet Intermediate Carrots. We have seldom, if ever, seen a finer display of Carrots than that of Mr. Pope's. The best twelve samples of Deverill's Middleton Park Favourite Beet, shown with foliage, came from Mr. R. Lye; Mr. R. A. Horsford, Old Chirk Castle Gardens, Llangotten Road, Knaton, second; and Mr. J. Bowerman third. Mr. J. Bowerman beat Mr. C. Brown and Mr. H. Folkes for six sticks of Aylesbury Prize Red Celery. Mr. Beckett again annexed first award for twelve fruits of Deverill's Glenhurst Favourite Tomato; and also for a collection of vegetables consisting of eight kinds. Mr. W. Pope formed a good second; Mr. H. Folkes, gardener to the Right Hon. F. Halsey, M.P., Gaddesden Place Hemel Hempstead, third; and Mr. C. Brown, fourth. The collections were, indeed, splendid, and more may be said about these subsequently. In a class open to amateurs, and asking for a dozen Onions, the first prize fell to Mr. T. A. Beckett, Bower Farm, Havering, Essex; second, to Mr. S. Taylor, Oxon; and third, to Mr. A. Startin, of Derby.

Miscellaneous.

Mr. H. Deverill secured a large silver medal for an exhibit of hardy cut flowers. "Hobbies," Ltd. (Mr. J. Green), staged Cactus Dahlias, Roses, and early Chrysanthemums in their usual place at the organ end of the building. (Gold Medal.) Mr. H. J. Jones was forward with a large group of cut Chrysanthemum blooms, chiefly Japanese varieties, among which were beautiful samples of Madame Von Andre, Miss E. Douglas, Mrs. R. H. Reid, Rabbie Burns, and the showy decorative variety Ryecroft Crimson. (Gold Medal.)

Mr. R. C. Pulling, Monkham's Nursery, Woodford, Essex, had also a gold medal for a group of Chrysanthemums in pots. His best were Madame Von Andre, E. Bettsworth, Madame Gustave Henry, Rayonnante, and Lady Audrey Buller; Messrs. Cutbush

and Sons staged Cactus Dahlias; and Mr. R. Owen, Maidenhead, was forward with early flowering Chrysanthemums somewhat the worst from the effects of the rain and wind storm. (Large Silver Medal.) Messrs. T. S. Ware, Ltd., had a table with Dahlias, chiefly Cactus, and early flowering Chrysanthemums, for which they were awarded a Silver-gilt Medal. Messrs. J. Peed and Sons had a group of cut hardy flowers, and obtained a Silver Medal. Mr. R. Foster, Nunhead Cemetery, S.E., had a tasteful group of Begonia Gloire de Lorraine, Cypripedium insigne, and Chrysanthemums. (Large Silver Medal.)

Mr. W. J. Godfrey, Exmouth, Devon, set up what proved to be one of the finest displays of cut Chrysanthemum blooms in the Aquarium. His blooms of the new Japanese variety Sensation were large, rich, and fine. The petals are broad, and incurve at the tips in charming style. Godfrey's Masterpiece promises to be grand this season; Exmouth Rival, a splendidly rich deep crimson, is also A1; and the new Queen Alexandra, a beautiful buff-bronze, shaded pink, is a superb acquisition. His Edward VII. forms a massive bloom, slightly incurving at the tips, old gold reverse and pale maroon above. Other fine varieties were Sensation, golden in colour; Amy Ensoll, Bessie Godfrey, and Mrs. F. Greenfield. (Gold Medal.)

Certificated Varieties.

The certificates were not numerous. Messrs. Cocker & Sons, Aberdeen, sent a yellow sport from Crimson Marie Massee. The committee came to the conclusion that it was identical with

HORACE MARTIN (*J. J. Martin*).—The latter received an Award of Merit at the last meeting of the Royal Horticultural Society, and obtained a F.C.C. here. Shown by Mr. J. J. Martin, Linslade Nurseries, Leighton Buzzard.

QUEEN ALEXANDRA and SENSATION were staged by Mr. W. J. Godfrey (see report), and received F.C.C.'s. An A.M. were given to his variety named Edward VII. Godfrey's Triumph was requested to be shown again.

RYECROFT CRIMSON (*H. J. Jones*).—This is a bushy decorative variety with crimson flowers (Award of Merit).

STAR OF AFRICA (*H. Love*).—A yellow seedling, shown by Mr. H. Love, Isle of Wight (F.C.C.).

Cardiff Gardeners' Association.

The association was opened on Tuesday, October 1, at the Grand Hotel, Councillor J. M. Gerhold presiding over a large gathering. Mr. Thomas Lewis, of Messrs. Clibran's establishment, Manchester, gave a lecture entitled, "Afforestation in Wales." Dealing mainly with the vast tracts of uncultivated land, particularly in North and West Wales, which might with considerable advantage be turned to good and profitable account by planting forests of quick-growing trees, the lecturer contended that a great opening was before the country for the employment of labour, and a profitable undertaking. He gave statistics showing that out of twenty millions of tons used in this country annually, eighteen million tons were imported from other countries, and to grow this quantity it would require at least 900,000 acres of land. As Mr. Lewis is acting in part for the Government in the Forestry Department, the members assumed that these figures were correct.

A hearty vote of thanks was accorded the lecturer, and a similar vote to Councillor Gerhold for presiding. Mr. Lea, of Penarth, staged a collection of Grapes, which included Gros Maroe, Lady Downe's, and Mrs. Pince, awarded a first-class certificate. A good number of the visitors enrolled themselves as members.

National Amateur Gardeners' (Liverpool Branch).

The exhibition room at the Common Hall, Hackins Hey, Liverpool, never presented a more charming appearance at any previous October meeting than that held on Thursday last, when the tables were fully taxed to hold the varied display of flowers, fruits, and vegetables. Worthy of notice were the cut flower displays, Mr. Robins scoring decisively with a miscellaneous collection that for quality left nothing to be desired. Begonias, Cactus Dahlias, Roses, &c., of the most brilliant colour, were prominent. A small, but well grown plant of Cypripedium Spicerianum was the winner (staged by Mr. Arthur Dodd) of the president's prize. The same gentleman exhibited other good cut blooms of Orchids, for points. Mrs. and Miss Stevenson had two pretty table plants, a Croton and Dracæna, for first and second prizes, besides many plants exhibited for points. The weak part of the show was the pot Chrysanthemum class, none of those staged gaining the requisite number of points to count a first prize.

Fruit of the finest size, rich in colour, and admirably grown, brought out much competition, Messrs. Muir and Tinsley being the chief winners. Beurré Clairgeau was the best dish of Pears, Louise Bonne of Jersey the best ripe fruit; Cox's Orange Pippin, the best dessert Apple; and Warner's King amongst the culinary varieties. In the large hall was an interesting limelight exhibition—many slides illustrating the work of several members—was enjoyed immensely. Mr. Muir, the president, occupied the chair most acceptably.—R. P. R.

St. Mary Cray Gardeners' Society.

The second annual autumn exhibition was held in the library on Wednesday October 3, and was very successful, being an improvement on last year, more members competing in the cottagers' section. Mr. E. Packman stood at the top of the prize list, taking seven firsts. Messrs. G. Terry, W. Packman, G. Francis, followed him closely. Messrs. Dobbie & Co. exhibited a splendid collection of Cactus Dahlias, seedling Pentstemons, Tomatoes, and a grand lot of Onions, the whole being tastefully arranged by Mr. A. Ireland, and added very much to the attractiveness of the show. Messrs. G. & J. Lane, Cockmannings Nursery, staged sixty dishes of Apples and Pears, the spaces between the dishes being filled with vases of Pompon Dahlias and Asters. The firm also staged a massive wreath and cross and two shower bouquets, all put up in Mr. W. Buster's well-known style.—R. F.

Scottish Horticultural.

The October meeting of this association was held in 5, St. Andrew's Square, on the 1st inst., Mr. Comfort, president, in the chair. There was a large attendance of members. After the usual preliminary business, Mr. Dobbie, of Leith, read a paper on "Public Parks." The paper was very short but suggestive, and advocated the use of all possible open spaces for the use of the public. A very warm discussion followed, in which many suggestions for the proper use and adornment of parks were made. A very hearty vote of thanks was awarded to Mr. Dobbie on the motion of Mr. Mackenzie. The table was again very gay with exhibits. Messrs. Methven & Sons again exhibited a very beautiful collection of early flowering Chrysanthemums, in thirty-three varieties. The season having been very favourable, these were beautiful specimens and represented nearly every variety worth growing. Mr. Todd, Musselburgh, exhibited two wonderfully handsome vases of Roses, one vase, pink Caroline Testout, very fine and beautifully fresh blooms; the other vase was crimson, mostly Général Jacqueminot, which were very rich and bright. Captain Hayward and Gustave Piganeau were also very fine. Mr. Todd also exhibited a handsome vase of Lady Fitzwygram Chrysanthemums, which was much admired, and two very beautiful specimens of The Queen Apple. Mr. Grieve, Red Braes, contributed Marigolds, &c. Seventeen new members were elected, and a large number were nominated for election.

[This pleasant report reached us too late for our last number.—Ed.]

Bristol Gardeners.

We have received from Mr. W. Ellis Groves, 14, Northview, Redland, hon. secretary of the Bristol and District Gardeners' Association, the syllabus of this mutual improvement society, embracing from Oct., 1901, to March, 1902. Oct. 10: "Climbing Plants, Indoor and Outdoor;" Mr. J. Kitley, Alvaston, Derby. Oct. 24: "The Dahlia;" Mr. F. G. Treseder, F.R.H.S., N.D.S., member of the Cardiff Gardeners' Association. Nov. 7: Prize essay on "Management of Lawns and Pleasure Grounds;" Mr. Gardiner, Redland. Nov. 28: "Ants and their Ways;" Mr. W. G. Smith, F.E.S., Knowle. Dec. 12: "Stove Plants;" Mr. J. T. Curtis, Stoke Bishop. Dec. 19: First annual dinner, St. Stephen's Restaurant, chairman, W. A. Garaway, Esq. Jan. 9: "Chemical Manures in the Kitchen and Fruit Gardens;" Mr. F. W. E. Shrivell, F.L.S., F.R.H.S.; chairman, H. Cary Batten, Esq., J.P. Jan. 30: "Tuberose and Primulas;" Mr. Garnish, Stapleton. Feb. 13: "An Important Natural Order of Plants—The Rosaceæ;" Mr. Moore-Sara, Stoke Bishop. Feb. 27: "Violets;" Mr. J. C. House, Coombe Nurseries. March 13: "Cineraria Culture;" Mr. Daniels, member of the Newport Gardeners' Association. March 27: "Six Good Vegetables;" Mr. J. Lee, Westbury-on-Trym. At each meeting prizes are awarded for collections of either fruits, flowers, or vegetables.

Croydon Horticultural Mutual Improvement Society.

The usual fortnightly meeting of this society was held in the society room at the Sunflower Temperance Hotel on Tuesday evening, about fifty members being present. Mr. W. J. Simpson presided. Mr. Maslen, gardener to Mr. Halley Knight, Bramley Hill House, staged a nice collection of fruit, including two good bunches of Black Hamburgh Grapes, dessert and culinary Apples, Pears, &c. Mr. C. A. Blogg had a rare Aloe Greeni, a fine plant, with a 2ft spike of flowers. The Croydon Public Libraries Committee exhibited a unique lot of valuable and useful books on Orchids, Ferns, fruit, and various branches of horticulture, an example that might be followed by many public libraries in the country. The subject of the evening was a paper on "Roses" by Mr. H. Harris the noted Rose grower and exhibitor, gardener to Mr. E. M. Bethune, Deane Park, Horsham. An interesting discussion followed, which was heartily taken up by the members present, and, on the proposition of Mr. Turney, supported by the chairman, a unanimous vote of thanks was accorded to Mr. Harris, and to the exhibitors also the thanks of the society were accorded.



Fruit Forcing.

CUCUMBERS.—The latest plants which are to afford fruit about the new year and onwards, should be placed out in hillocks or ridges, training them with a single stem to the trellis. Growers not having the convenience for a Cucumber house, may secure fair supplies of winter fruit by growing the plants in pots or boxes, training the growths over paths in stoves, fruiting Pine houses, or other well-heated structures. Remove all deformed fruit in a young state. Maintain a night temperature of 70 degrees, falling

straw, and mice or rats kept down, or the animals may render the Vines useless by girdling them at the collar.

VINES FOR STARTING IN DECEMBER.—Pruning, if not already done, must not be further delayed, as early and complete rest for a few weeks contributes to an even break. Pruning to two buds is usually followed by a good show of useful bunches, but if such has not been so in previous years, or larger bunches are desired, the shoots may be left a little longer, or pruned to the most promising eye nearest the base. What, however, is gained in size of bunch is usually lost in compactness thereof, unevenness of berries, and bad finish. Besides, bunches of 1 lb to 2 lbs weight are quite large enough for early Grapes. Wash the stems with tepid soapy water (4 ozs of softsoap to a gallon of water),

where there has been red spider, scale, or mealy bug with a solution of caustic soda and pearlash, 2 ozs each to 1½ gallon of water, or, where there has been fungi trouble use a solution of sulphate of copper, 1 oz to 1½ gallon of water; apply carefully, but just wetting every part with a brush moistened in the solution. Thoroughly cleanse the woodwork of the house, and linewash the walls. Remove the surface soil down to the



PLUM REINE CLAUDE DE COMTE HATHEM.

to 65 degrees in the morning, 70 degrees to 75 by day, up to 85 degrees or 90 degrees with sun, admitting a little air at the top of the house at every favourable opportunity. The evaporation troughs should still be charged with liquid manure, and the floor damped about 8 a.m. and 4 p.m., dispensing with syringing over the plants. Reduce the supply of water at the roots, but not so much as to cause flagging. A little artificially compounded fertiliser sprinkled on the beds occasionally will benefit the plants, through the watering washing the elements into the soil. Keep the foliage thin and the glass clean, so as to secure thoroughly solidified growth.

EARLY VINES IN POTS.—As a start must be made about the beginning of November to have ripe Grapes in March or early in April, the tree leaves and stable litter should be in course of preparation for affording a mild, sweet bottom heat. The heat about the pots should not exceed 65 degrees at the start, bringing up the fermenting material to the level of the pots by degrees, so as to augment the temperature to 70 degrees to 75 degrees by the time the Vines are in leaf. Any Vines in pots for starting later should be placed under cover, an open shed with a north aspect being suitable, but the pots must be protected with dry hay or

roots, if not to the whole extent of the border, for a distance of 3 or 4 feet from the stem, and supply fresh loam, so as to encourage new fibres and an extension of fresh roots from the collar. Add a quart of steamed bonemeal and a gallon of wood ashes to each three bushels of loam, or supply some approved fertiliser, according to the instructions.

HOUSES OF RIPE GRAPES.—Thin-skinned Grapes are more susceptible to cold and damp than are the thick-skinned varieties. This applies equally to Black Hamburgs and similar kinds as to Muscat of Alexandria and Madresfield Court, but Hamburgs do not require a temperature of over 45 degrees for good keeping, and there must not be any deficiency of moisture at the roots, otherwise the Grapes will shrivel. Remove all dead and decayed leaves from the Vines where Grapes are now hanging, and look over the bunches for any shanked or decayed berries and remove them. A temperature of 50 degrees is most suitable for Muscat of Alexandria. Lose no opportunity of giving air when the days are fine, turning on the heat, so as to cause a gentle warmth in the pipes, not so much to dry the atmosphere as to cause a circulation of air, which is the best safeguard against damp. Turn off the heat

at midday, or soon after, so as to allow the pipes to cool, but not so as to lower the temperature below the night minimum. When the heat falls too low, and the temperature is raised, moisture condenses on the berries and remains stagnant, the skin of the Grapes is more or less decomposed, and fungal germs find a medium for germination, and soon set up speedy decay. There is no harm in a low night temperature, the fault lies in not giving air soon enough, so that the heat from the hot-water sun expands the atmosphere, and the moisture is condensed on the berries as well as on the glass. In dull weather, especially during fog, it will be necessary to keep a genial warmth in the pipes, and with the house closed, in which case the moisture will be condensed on the glass instead of the Grapes.—ST. ALBANS.

The Kitchen Garden.

POTATOES.—Wet and pasty ground is not fit to be trod upon until some of the superfluous moisture has drained away. When in the above condition Potatoes ought not to be dug, but as soon as workable again the whole of the crop should be completed lifting. Examine the tubers well to ascertain their condition, whether diseased or not, as it is not desirable to store any in the latter state. When the best have been picked out, thoroughly dry them by free exposure to air, after which they may be placed in a dry, cool structure, and covered with a good layer of straw. Clamping out in the open is a good method of keeping large quantities. If seed Potatoes are selected, they should be of medium size, clean and sound.

CELERY.—All the rows should be finally earthed in a short time, especially in situations where the soil is strong and refertive. Draw the stalks together closely round the hearts, and after breaking down sufficient soil and pulverising it, draw it carefully round each plant. When the final earthing is done, bank the soil firmly, cutting the sides almost perpendicular, so as to throw off the rain.

BLANCHING ENDIVE.—Well-grown plants of Endive should be prepared for use by blanching. This is effected by placing a slate over the centre of a few plants at a time, or by drawing all the outside leaves together in the form of a cone and tying with raffia grass.

TOMATOES.—Green fruits hanging on the plants, if the latter are not in a warm place, should be cut with a portion of stem and hung together in bunches in a warm, airy structure. Of course, they ripen better on the plants, even if these have no leaves, and especially when grown in pots, being then more portable and easily removed to a warm structure. The outside Tomatoes not yet ripe may be cut with plenty of stem and hung in a sunny, warm structure to ripen. Plants raised from August sowing, and established in 8-inch pots, must have abundance of light, air, and warmth, and be grown near the glass. Keep the atmosphere dry in the middle of the day, when the flowers are open, and artificially fertilise them to induce a good set.

WINTER CUCUMBERS.—Strong plants with abundance of fibres should be encouraged to multiply the roots by frequent light top-dressings of rich soil. Bottom heat and top heat is essential. Strong side shoots may be trained over the available space, stopping the shoots just beyond the fruits. Maintain the roots moist, but not saturated, and syringe the plants early on fine afternoons, closing early and damping the floors, stages, &c., at the same time. Allow no fruits to remain on the plants after they are fit for use, as doing so exhausts the plants.

KIDNEY BEANS.—Seeds of Ne Plus Ultra Dwarf Kidney Bean, or some equally good sort for forcing, may be sown in 8-inch pots, eight or nine seeds in a pot, using a compost of good loam. Start them in a temperature of 55 degrees, and when well advanced place in a heat of 65 degrees to flower and develop fruit. Close attention should be given to their requirements as regards water. Checks to growth bring on red spider and the plants fail. Liquid manure of a weak character may be given when the pots become full of roots.

CARROTS.—Cut off the tops of Carrots which are ready for lifting, and remove from the ground in fine dry weather. When the roots are quite dry they are ready for storing in a cool structure, placing them between layers of dry sand or ashes. Straight roots of medium size are best for ordinary use, and these only need be stored for culinary use.

WINTER SPINACH.—The rows of Spinach, now a fair size, should be thinned out a little more. In fine, dry weather run the hoe between the rows, and give a slight dusting of soot as a deterrent to slugs.

LETTUCE.—Make a final planting of Lettuce on a sheltered, well-drained border. Full-grown Lettuce may be lifted and planted in a frame. Place on the lights, but tilt them so as to allow a free and constant supply of air. Young Lettuce plants, too, may be inserted in a frame, where they will grow gradually through the winter if kept cool and freely ventilated.

PARSLEY.—To ensure a supply of Parsley when the weather is hard, plant some strong roots on a spent hotbed, in a spare frame. The lights may remain off at present.—LYMINGTON, HANTS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

NAME OF MAGGOT (A. C. E.).—The specimens sent are the larvæ or maggots of some species of fly, presumably a Scatophaga, but these so nearly resemble each other that often they cannot be determined till the fly is reared. The tribe is useful generally, helping to destroy or disintegrate offensive matters. Possibly they had been feeding upon something in the styre, and were migrating to find a spot where they could enter the chrysalis state.

THINNING PEACH SHOOTS (A. B. C.).—You will have sufficient young wood if the shoots are 6in to 8in apart, but we should limit the thinning to the old bare shoots or long bare branches, and to those which have fruited this season. If the shoots 18in to 2ft long have triple buds at about 14in length you may shorten them to those, and safely, as in such a length there cannot fail to be wood buds, as well as at their extremities. It will not injure them for future fruiting, but be conducive thereto by admitting light and air to the parts left, thereby securing their more thorough ripening of the wood.

PLAN OF AVINERY (AMATEUR).—Perhaps the plan here offered may meet with your approval. The vinery has been placed in conjunction with one of the dwelling-rooms, wherein we have supposed a goodly fire-place and boiler to exist, and this boiler could be made to serve the hot-water pipes necessary for the heating of the vinery and the adjacent conservatory. Ordinary 3-inch or 4-inch pipes should be used, and one flow and return will be sufficient for a Hamburgh vinery. The line A to B denotes the width of the vinery and serves to indicate the flow-nt from the boiler. Any such vinery could be arranged with tolerable appropriateness next to a kitchen, where, of course, one expects a good fire-range and boiler. In the planning of the dwelling-houses the above plan may assist you.

ASPARAGUS INFESTED WITH FUNGUS (W. B.).—Yes, the Asparagus growths are infested by a fungus (*Puccinia asparagi*), producing the disease known as Asparagus rust, though it is quite black. The disease does not usually appear until after midsummer or before the cutting of the heads for the year has ceased, though sometimes the æcidium stage of the fungus appears on the earliest shoots. The uredo stage follows the æcidium as brown pustules on the stem and branches, and later in the season black streaks and spots appear, often so numerous as to blacken the stem and branches. These are due to the production of telentospores, which survive the winter and start the disease anew the following season. The infection implies the weakening of the Asparagus and an inferior crop the following season, or, indeed, not any heads fit for gathering. The best preventive is to cut the haulm in autumn, allow it to dry, and, covering the tops with a light coating of dry straw, burn them. This apparently harsh treatment destroys the telentospores not only in the diseased tops, but also those in the ground, and the plants the following year start into vigorous and healthy growth, but require a year to recuperate. As the grass in your case is quite killed by the fungus the weakening of the plants will be proportionate. Nevertheless, we should try the fore-named treatment, and in the early part of summer, say the middle of June, spray with Bordeaux mixture, and repeat once or twice at intervals of a fortnight or three weeks. The most important point, however, is to remove diseased growths and burn them, thus preventing the possibility of infection in the spring. As the bed was affected last year, and most of the grass killed this season, it is matter for your consideration as to whether the bed is worth keeping or not. Nevertheless, we consider (1) the treatment advised would be a cure for the present bed; (2) you may safely plant another bed in the garden, in another quarter, or, for that matter, on the same ground as the diseased plants now occupy, but upon the condition, in either case, that the grass of the present bed be cut, dried on the ground, then covered all over with dry straw, and for about a yard beyond the bounds of the plants all round, burning the straw and tops. This will end the telentospores, and the disease must come from elsewhere; (3) no special preparation of the bed will avoid the disease. The fungus must be killed and kept from attacking the plants.

DRESSING FOR VINE BORDER (G. G.).—Remove the top soil down to the roots, but without injuring them, and replace with sound turfy loam mixed with inch bones at the rate of 2 bushels of bones to a earload of soil, and surface the border with a covering of good manure. Do it at once.

PALM AND DRACÆNA SEED SOWING (A Young Gardener).—Sow them all in strong heat in February, and in a compost of two parts fibrous peat and one part turfy loam, with a free admixture of silver sand, covering each the diameter of the seeds, and keep moist. A bottom heat of 90deg is not too much, and top heat of 75deg to 90deg.

STRENGTHENING OLD VINE (J. D.).—The lowering of the raised part of the border and severing the fibres that had issued from the stem would, as you say, weaken the Vine to a considerable extent, the wood being rather weak and the bunches small. The scorching of the leaves would also have a prejudicial effect, but this would be counteracted to some extent by allowing the laterals to remain, both as regards root action and assimilating power. We should remove as much of the surface soil as can well be done without injury to the fibres, picking it out from amongst the larger roots, and for some distance from the stem outwards, supplying good turfy loam in its place. The object of this is to

induce roots to form plentifully in the fresh material, and then they can be fed to almost any extent by top-dressings of fertiliser. In case the border and the condition of the roots do not admit of this, and the surface being rich from top-dressing or mulching with manure a dressing of air-slaked lime and soot in equal parts by measure, mixed, applying $\frac{1}{2}$ lb of the mixture per square yard, and pointing in as deeply as the roots allow without injuring them, would probably benefit the Vine by sweetening the soil, as well as supplying essential food and rendering other available. As a fertiliser the following mixture may be used at the time of starting the Vines—dissolved bones, dry and crumbling, three parts; double sulphate of potash and magnesia, two parts; sulphate of lime, one part; mixed, applying 4oz of the mixture per square yard, and pointing in very lightly, merely scratching with a fork. If you renovate the border, the top-dressing of fertiliser may be applied as soon as completed, or even whether renovated or not, but not if the lime and soot dressing is given.

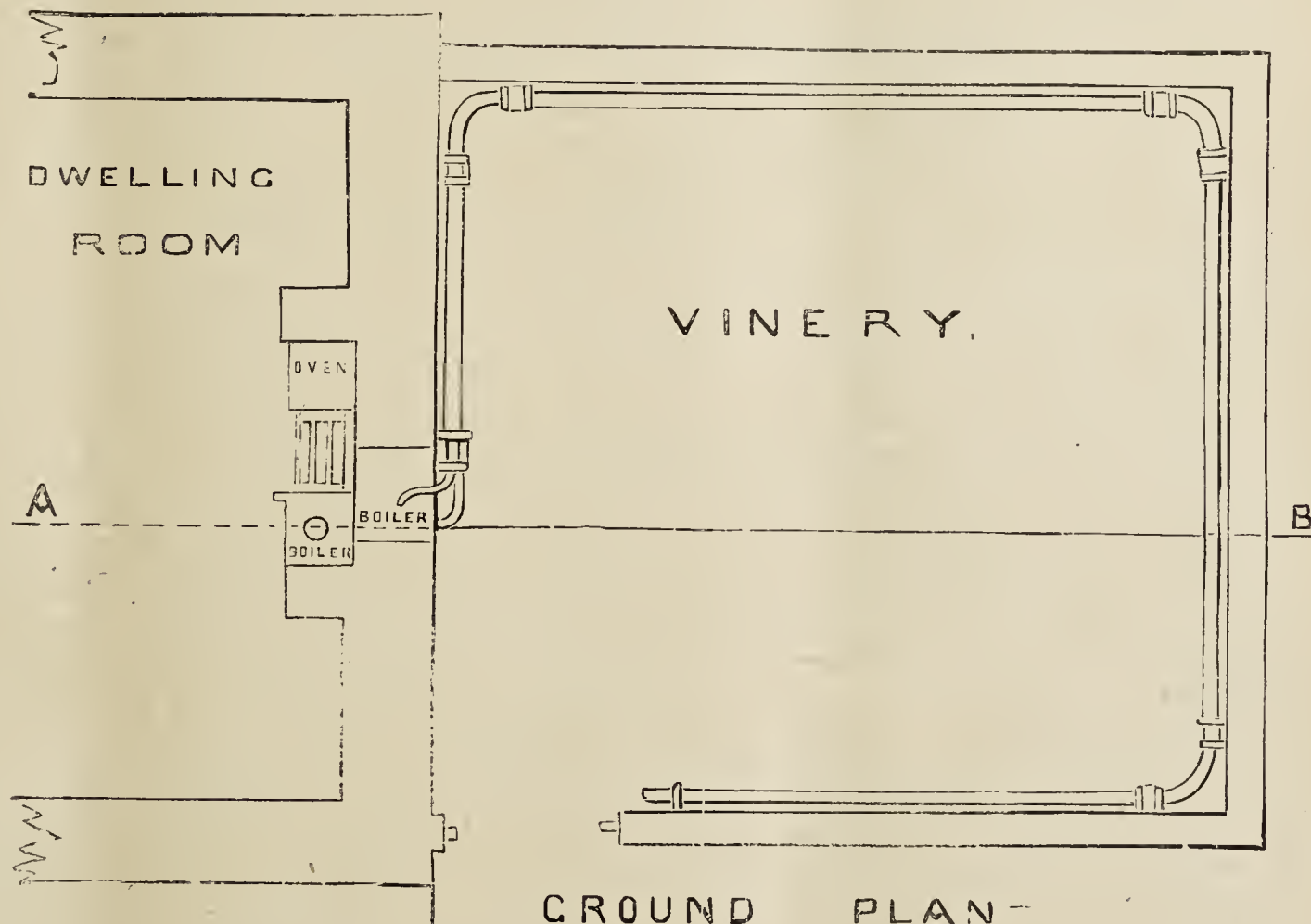
TREATMENT OF TOXICOPHLEA SPECTABILE AND OTHER STOVE PLANTS (A. W. G.).—Toxicophleæ spectabile is a warm greenhouse or cool stove plant, and is propagated by cuttings of the young half-ripened growths in sand in bottom heat under a bell-glass. Peat soil with a third of fibrous loam will grow it well, keeping moist at all times, and watering freely when in growth. Francisceas succeed in a compost of equal parts fibrous loam, sandy peat, and leaf soil, with a free admixture of silver sand and good drainage. Cuttings of the young shoots after they become firm root well in sandy soil in bottom heat covered with a bell-glass. Eranthemum pulchellum is also a stove plant, doing well in fibrous loam, with a third of leaf soil, and cuttings of the young shoots strike freely in sandy soil in gentle bottom heat or without, but emit roots less speedily. Strelitzia juncea, another stove plant, requires two parts fibrous loam, one part sandy peat, half a part leaf soil, and a sixth of silver sand and good drainage. It is propagated by suckers or dividing the plant, and requires to be kept copiously watered when in growth, and kept rather dry when at rest. All require light and airy positions, and abundant atmospheric moisture when making fresh growth, and water when not growing to keep the foliage from flagging.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (L. J. Preston).—1. Apple Yorkshire Beauty; 2. Cellini; 3. Reinette du Canada; 4. Manks Codlin; 5. Lane's Prince Albert; 6. Duchess's Favourite; 1. Pear Gansel's Bergamot; 2. bad specimen, and unable to name. (Ignoramus).—Apple Bess Pool; Pear Gansel's Bergamot. (G. A.).—1. Apple Annie Elizabeth;

2. Lord Suffield; 1. Pear Beurré Diel; 2. Louise Bonne of Jersey. (John Fordyce).—Apple Beauty of Kent.

NAMES OF FLOWERS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (G. H. Gosport).—The weed is Ajuga reptans, only to be overcome by assiduous eradication. (Woolton).—Piece of a Salix with the leaves punctured by an insect: the irritation caused by the puncture induces the berry-like swellings. (H. O. H.).—A magnificent bloom of Dendrobium formosum giganteum. (A. L.).—1. Picca Morinda; 2. Coprosma Baueriana variegata. (C. D.).—1. Odontoglossum Harryanum; 2. Erigeron mucronatus. (F. L. J.).—1. Helianthus rigidus; 2. Eceemocarpus scaber.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.



Trade Catalogues Received.

C. Howie & Co., Seed Merchants and Agricultural Agents, Market Street, Kimberley, S.A.
Thos. Rivers & Son, Sawbridgeworth, Herts.—Fruit Trees, Roses Shrubs.

Phenological Observations.

OCTOBER 11TH TO 17TH.

11 Fri. Old Michaelmas Day.	14 Mon. Swallow last seen.
12 Sat. Henesuckle and Ash leaves fall.	15 Tues. Ladybird hibernates.
13 Sun. Aspen leaves fall.	16 Wed. Martin last seen.
	17 Thr. Hazel leaves fall.

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, Mr. G. J. Ingram, 175, Victoria Street S.W.
UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—Secretary, Mr. W. Collins, 9, Martin Dale Road, Ball am, London, S.W.
ROYAL GARDENERS' ORPHAN FUND.—Secretary, Mr. Brian Wynne, 8, Dames Inn, Strand, London, W.C.



Home Doctoring of Live Stock.

Thou shalt not kill, but do not strive officiously to keep alive.

A new rendering of the old commandment, and a rendering that wants looking into carefully, for there is much truth in it. Officiously—in an intermeddling manner—is the dictionary definition. There always are quite as many officious folks about as apathetic ones, and it is quite an open question which class do the most harm. We have known old-fashioned doctors much blamed for leaving things to Nature—giving Nature a chance, for Nature is a wonderful doctor. Many of the younger men of the modern family prefer to be always doing; they can't rest without taking action of some sort; but, mind, these are the young ones. They are in too great a hurry to see the effect of their medicines; in too great a hurry to use the surgeon's knife. Their action must not be confused with the promptitude of their seniors; it springs from quite a different line of reasoning. These men mean well and in time will settle down quietly. But why this talk of doctors? Because we all more or less practise a bit on our own account, possibly on ourselves or our families. We don't know man or woman who has not a list, more or less long, of favourite remedies, all infallible and all of the utmost value! Whatever else we can't do, we can advise and treat many of the daily ailments of mankind. In a remote spot in the back settlements of America we should be useful, valued members of society, but in closely populated England our services are not so requisite.

What a field for action there is for a man on a farm, and his patients can't retaliate except by ultimately dying! There is such a variety of live stock, and all subject to ailments more or less severe, that an energetic man can constantly find a job. It is only a pity the knowledge is not sounder. It might be sounder in the future if the young men who have to do with live stock (farmers' sons or employés) would only attend and listen intelligently to some of the veterinary lectures delivered up and down in the country under the auspices of the County Technical Instruction Committee. In our mind, the first step in the right direction would be to banish all nostrums and extraordinary old wives' recipes from stable and cowhouse. Some of them are so wonderful, and on the very face of them so preposterous, that they are only trusted to by the most ignorant of persons, and it is these persons, alas! who often have the most to do with live stock. They fearlessly employ potent drugs, the nature and properties of which they have not the faintest idea. Someone as ignorant as themselves has furnished the formula; it smells strong and nasty, and therefore must be efficacious.

A farm is a manufactory for producing various kinds of live stock. There is always a risk with live stock, and a certain percentage must be deducted before any calculations for profit can be come at. If the death rate rises above a certain figure there is no profit left at all; it is well if the farmer gets off without actual loss. Such being the case, he is naturally anxious to keep the casualty list as low as possible, and therefore in cases of ill-health is prepared to go to some expense and trouble in doctoring. It is said there never was a litter of pigs yet without a wreckling, i.e., a weakling—one that did not thrive as the others—and it is impossible to see a flock of lambs absolutely even. The breeder of calves acknowledges the same fact. There are some that take kindly to food and turn every ounce to good account, and there are others equally well bred who refuse to assimilate what they get. There may be constitutional delicacy. There may have been a throw back when young, a weak digestion, a bad attack of scour, or the germs of the dread tuberculosis.

Of course, the ailment may be only temporary, and by all means try the best remedies available—richer food, stimulating medicines, and anything else that suggests

itself. But do not go on tinkering too long. If good results do not follow quickly cast up the cost of the "extras," and you will find the job is not a paying one. The animal does not improve, it is an eyesore, and takes up the room and more than the attention that is bestowed on a healthier animal. If at all fit for human food kill and dress; the first loss is the least. In the case of animals of small intrinsic value, if there should be an outbreak or anything at all infectious, kill and bury in lime at once. Here, again, the first loss is the least. People do not always realise the danger of a disease-infected animal. We remember once seeing three or four wretched lambs in a paddock that were being treated for scab. Had they been perfectly whole and sound their value might have been, say, £1 each. As it was they were miserable objects, and were infecting all the woodwork, &c., of the field in which they were placed, and this was in a paddock adjoining the homestead that would be constantly in use. Anyone who knows anything of the nature of sheep scab will agree with us in our views as to the highly infectious nature of this ailment. The subject is in a state of constant irritation, and tries to get relief by rubbing against any strong thing in its way, and the disease is conveyed in particles of infected wool and bits of loose scab. These will retain their vitality for an immense length of time.

Usually the value of the pig is so small that he cannot afford to pay a big doctor's bill; he is, too, an awkward, ungrateful patient. Again, we say, if there is any flesh on his bones make him into bacon before he loses every bit of condition. It does not require the eye of a savant to tell whether the meat is wholesome or not, and if there is any doubt, use quicklime. There is one thing to remember. If you have administered strong medicine it won't do to kill at once; there will be too much flavour abroad. When we come to horses, the case is different. They are the most valuable stock on the farm, and their ills and complaints are fairly well understood by the better class of "Vets." Personally, we do not like much amateur physicking of the horse. If he is of any value at all he is worth a doctor's care and attention.

There are certain complaints and forms of lameness that are practically incurable, and in any case where there is suffering we should counsel the kennels. It seems hard that a horse which has been a faithful servant when at his best should be compelled to continue work when aged and worn out. Even if the work given is only slight, we confess to a great objection to see that work done. In any case, we cannot stint food, and unless we are above such petty economies we had better fill his place with a sound, workable animal. We wonder if it is real kindness to turn old horses out and give them the run of their teeth! We believe a speedy death after a good working day would be a better way of showing our appreciation than by allowing a weary time of lingering decay. We know there is a good deal of sentiment on such matters, but it does not do to allow sentiment to get the better of common sense! It is not heartlessness that makes us advocate "the happy dispatch" for worn-out horses and toothless dogs; it is only a humane feeling. There is more true kindness in ending a tired life than in striving to prolong it.

Work on the Home Farm.

It has been a grand week for the Potato lifting, and the crop, as well as the work done, is wholly satisfactory. There is not absolute freedom from disease, but unsound tubers are only occasionally noticed. Rumours of widespread disease are still prevalent amongst farmers, and they must gain strength from repetition. Perhaps the desire to encourage buyers gives a fillip to these pessimistic reports.

The opportunity to get the Potatoes stored away has been very welcome, for other work was becoming very scarce. Lea ploughing is still out of the question, and although it is raining heavily as we write, nothing less than a deluge is needed to again start the ploughs. Those who are strictly corn growers, and are in despair about Wheat sowing, must see with envy the beautiful seed-bed which is the natural legacy of the Potato crop. The labour bill of a Potato field is heavy, but there are many compensations, and this is one of them.

In one deep soil district we are informed that many fields, after being worked and cleaned, are already ridged for next year's Potatoes. This is "up to date" with a vengeance. Marvellous stories are current as to the crops of two new Potatoes, Charles Fidler and Empress. We will verify them before giving figures.

the restoration of the same in cases of baldness, and its employment for that purpose was persisted in by the empirics for many a day.

Then the tooth-like shape of Henbane seed was considered as a proof that it would cure the toothache. This eccentric theory of like cures was pushed still farther. Ragwort was given to horses because the uneven edges of its leaves suggested the uneven motion of the animal when suffering from an attack of the staggers, whilst belief also prevailed that Fern seeds conferred invisibility, arising from the notion that Ferns bore invisible seed, as there was ever great difficulty in finding it. Instances might be multiplied *ad infinitum* of cases in which a fancied resemblance of some part of the plant to signs of disease were indicated, but I have surely cited enough in this connection.

Parkinson, whose name is well known as an early botanist, next comes upon the scene to corroborate the foolish dogmas promulgated by Culpepper, and we are forthwith enlightened on many fresh matters. Thus we are gravely told that Eyebright (*Euphrasia*) wine will not only enable old people to read without spectacles, but that it has in many instances been known to actually restore sight to the blind. Vinegar of Squills, again, if taken in the morning before an hour's walk, assists the digestion, improves the voice, sharpens the sight, and clears the complexion; virtues which, no doubt, insured it great popularity. Valerian juice was said to draw iron or wood out of flesh, whilst Fennel performed the same office in the case of fractured bones; or, if thought preferable, if taken internally, with the addition of Solomon's-seal pounded in a draught of ale, the fractures would actually be reset, the liquid glueing, as it were, the parts together again. Cowslip wine restored beauty, so there was every excuse for elderly ladies whose charms were fading, drinking it; whilst the juice of the Marsh-mallow was asserted to be a preservative for all time from every disease—truly a very comprehensive remedy. Mothers, we learn, had but to eat freely of that somewhat acrid fruit, the Quince, in order to transmit wisdom to their children, who surely, if endowed with a modicum of the same, would hardly follow their parents' practice.

Wives, again, who suspected their husbands of infidelity, by inducing them to sup at home off Periwinkle salad would cause the love of the errant to return to its legitimate object. Rue was said to render a man quick, subtle, and inventive; whilst the virtues attributed to the herb Sage were so numerous that a mortal namesake propounded the query "How is it that one who groweth Sage in his garden can die?" Then there existed a recipe to kill a man in such sort as though he should seem to have died laughing; but, inasmuch as the publication of this might induce an attempt at homicide, it is as well, perhaps, that full particulars are not given! Numerous herbal preventives against the plague, too, were forthcoming when that deadly visitation took place; but none, seemingly, were very efficacious, judging by the number of people who succumbed to that terrible ailment. Here, perhaps, we may be pardoned for interpolating that old story of King Mithridates, the monarch who took a vegetable antidote so often when there was no real occasion for it, that afterwards, when he attempted suicide by poison, he utterly failed to accomplish his purpose. Basil has ever had an evil reputation as an encourager of scorpions, some even going so far as to say that they might be bred in the head by merely smelling the plant. This belief may have arisen from old, rude representations of mortal brows bound with scorpions. Mandrake bore a fearful name for all that was bad. It was said to grow under the gibbet, and to spring from the blood of malefactors, to resemble in some manner the human form, and not only to shriek aloud when pulled out of the ground, but to threaten those who attempted to remove it with madness and death. Juliet, among the terrors she dreaded on awaking in the vault, conjures up:—

Shrieks, like Mandrakes, torn out of the earth,
That living mortals hearing them, run mad.

Leeks were planted on the housetops to preserve the inmates from lightning, and it was thought that those taking shelter under a Bay tree in a storm would come to no harm.

Not satisfied with finding presumed remedies for ills and diseases of all sorts in the judicious use of plants, our worthy ancestors must still travel further afield and endeavour to find in many of them omens, signs, and auguries for the future. In this connection it was taught that if the Peach tree or the Elm cast its leaves early it prognosticated a coming murrain amongst cattle. The presence of a worm in an Oak-apple was considered ominous of scarcity, but if a fly appeared therein it betokened plenty. A spider indicated mortality.

There was another reading to this superstition of even a still more disturbing character, for it was said that if the little tenant crept in the core, famine was imminent; if it flew away war might be apprehended; and if it ran, pestilence ensue. A Fir tree struck by lightning gave warning of the approaching demise of its owner. Even the poet of the Hesperides turned his lyre to an unwelcome melody when he sang:—

When a Daffodil I see
Hanging down her head towards me,
Guess, I may, what I must be:
First I shall decline my head;
Secondly I shall be dead;
Lastly, safely buried.

—WM. NORMAN BROWN

Liliums for Pots.

(Concluded from page 312.)

The varieties of *L. auratum* should be syringed frequently with water that has been exposed to the sun, and occasionally with quassia water. Keep the tobacco powder distributor at hand, in case of green fly making an appearance; attention to these matters is vital to success. Want of cleanliness is a potent cause of mortality amongst *Liliums* of all species.

When forcing *Liliums*, care should be exercised not to have them brought into the hothouse until they are quite rooted. *L. Browni*, a form of *L. japonicum*, is another very fine subject for pot culture. The large, trumpet-shaped flowers are creamy-white, with the reverse of pale purplish brown. It grows to the height of 3½ to 4ft, and is at once distinct, chaste, and beautiful. Plenty of pot room should be afforded, and also liberal watering when in rapid growth. The same compost as recommended for *L. speciosum*, with the addition of a very little peat, is found to be a good mixture in which to grow them. They have large bulbs, and are easily grown.

L. sulphureum Wallichianum (superbum), a trumpet-shaped flower of pleasing sulphur colour, is also a good pot subject. *L. nepaulense* is a singular species, having sulphur-coloured, trumpet-shaped flowers, recurving sharply at the apex of the perianth, and is heavily tinged with purple on the inside. This comparatively uncommon *Lilium* succeeds best if the turf is not too finely broken up, and a fair amount of grit added; leaf mould being mixed with the loam, and a piece of charcoal broken up amongst the soil would insure success, as this species is rather more fastidious than some.

Most of the Burmese Lilies require the same treatment as *L. nepaulense*. The groups including *L. davuricum* and *L. elegans* (syn. *Thunbergianum*), in their numerous varieties, are also very much used for pot culture when treated the same as *L. speciosum*. A good plan is to allow some plants to remain in the frame longer if the fibre is removed from them early in the spring, care being taken that the spring frosts do not injure the soft young growths. When this course is pursued the Lilies will flower later, and should, when strong enough, be placed on slates or similar hard material in a position open, but having the sun's rays broken, and be brought into the house when the buds are just expanding. This mode of procedure will save valuable greenhouse space, and extend the flowering period.

A method more recently adopted by gardeners who do a lot of furnishing is to grow batches of the different Lilies in open ground prepared as before mentioned, and when the flowers are expanding carefully lift the plants, place them in suitable sized pots, having first carefully crocked them and covered the drainage with rough cocoa-nut fibre or sphagnum, bring them into a cool shaded place for a day or two, and then use them for the conservatory, corridor, hall, or room as required. When they have gone out of flower, place them back, whence they will suffer scarcely at all from the move, provided they get sufficient water during the process.

This is a space-saving method, and one which may perhaps be extended to other subjects with a similar object in view. One great advantage is that large masses can be made of flowers of equal ages, creating the maximum of effect. Retarded bulbs should not be hurried too much at first, but should be started in gentle warmth, especially at the bottom. Then, when ready, afford a stove temperature, with as much light as possible, during the winter months. Neglect of this is a frequent cause of retarded bulbs not maturing their flowers.—E. LADHAMS.

**Lælia præstans alba.**

Lælia præstans alba (*L. præstans* is now recognised as a variety of *L. pumila*) is a pretty little Orchid, always greatly admired. It is in flower in collections at the present period. The sepals and petals are broad, pure white, the base of the lip also being white and finely contrasted with the rich crimson upper portion of the same appendage. The type of *L. pumila* has been found growing upon trees in Rio Janeiro, at an elevation of 2000 feet, or more. *L. præstans*, which we illustrate, came from Santa Catherina, though it has never become so well known to growers in general as the charmingly beautiful *L. Dayana*. The latter, by the way, is also a variety of *L. pumila*, thus—*Lælia pumila* var. *Dayana*. Mr. Wm. Bull of Chelsea secured the variety *L. præstans alba* in midsummer, 1888, probably from the same locality.

Orchids at Down House.

At Down House, Bristol, no pretence is made of growing a large collection of Orchids, but what are grown are really well done. In a stove house, where a miscellaneous collection of plants are cultivated, there are a number of very fine specimens of *Dendrobium-Phalenopsis*, all the best of them being grown in hollow pieces of bone. There is no question about their satisfactory condition, for not only do strong plants increase in vigour, but quite small pieces that have only been in the bones for a year or so are throwing up remarkably good growth.

A number were flowering with freedom, nine spikes being counted on a plant in a small receptacle about 3 inches across, the varieties being very fair. One very delicate rose-tinted form had flowers of fine form and substance, while several had the deeply tinted crimson lips so much admired in this species. In the same house some fine specimens of *Dendrobium nobile* were growing in baskets made of cork, with bottoms of elm, by Mr. Curtis, who is very enthusiastic in Orchid culture. The growths are very fine indeed, and after a good ripening cannot fail to flower profusely.

Those who think a lot of heat necessary for *Cœlogyne cristata* may learn a lesson from the plants grown by Mr. Curtis. They are kept in cool frames and allowed liberal supplies of air and moisture. The pseudo-bulbs are immense, and the plants throughout in the best of health. *Cypripedium insigne* is grown alongside the *Cœlogyne*s, and is equally satisfactory; indeed all the Orchids are in capital health, and reflect the greatest credit upon the grower.

A Fine Odontoglossum.

Calling upon Mr. Lee, the energetic gardener at Claremont, Westbury-on-Trym, recently, I was much struck with the fine

appearance of a specimen of *Odontoglossum grande*. The plant is growing in a 9-inch pot, and carries five flower spikes, with an aggregate of twenty-five fine blossoms. In this condition it is one of the finest of Orchids, and worthy of all care, but nurserymen who get hold of large plants are very fond of cutting them up, so that large healthy specimens are usually conspicuously absent from collections.

Oncidium microchilum.

I have received flowers of this rather uncommon species to name from Mr. Price, gardener to G. White, Esq., of Cotham House. It is seldom seen in cultivation, which is rather a pity, as it flowers at a time when Orchids are scarce, and the blossoms are very useful for buttonholes, besides making a pretty display upon the plants. The leaves and bulbs are pale green, the former thick and leathery, and the spikes are purplish-brown, bearing a large number of small flowers. The sepals and petals are pale yellow with light brown spots, and the lip is very small, white with crimson spots. Mr. G. Ure Skinner, who discovered this species in 1838, says he found it "growing on a bare rock, with a quantity of dead grass and leaves about its bulbs and its roots, woven into the interstices of the rocks. I never saw it except in such

situations, generally exposed, and always among rocks." This, in a way, is an index to the kind of treatment required under cultivation, and being a native of Guatemala, an intermediate temperature is quite high enough for it.

Peristeria elata (Holy Ghost Flower)

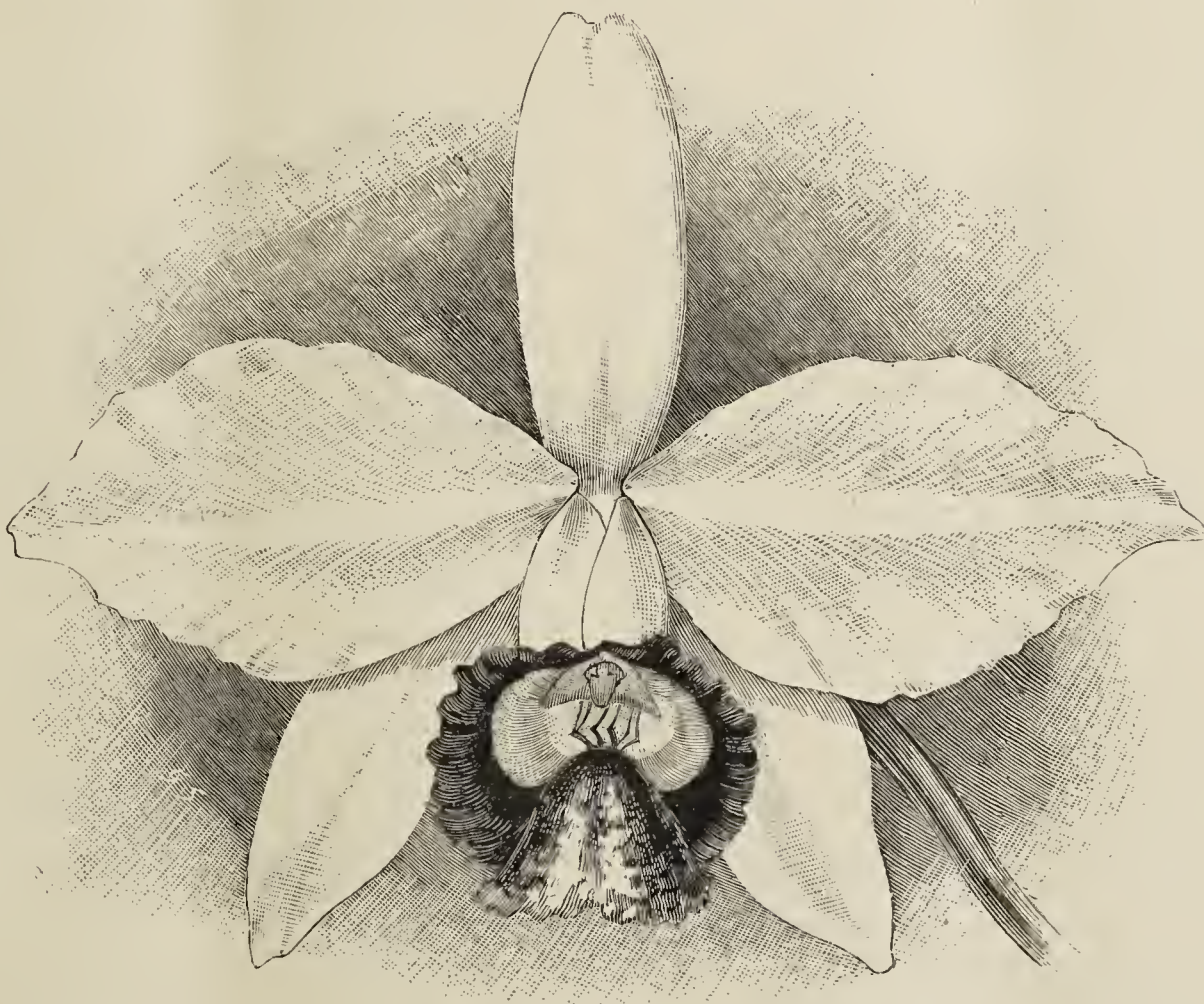
The following short note may be of interest to the correspondent who sent a bloom to be named.

A plant of the above Orchid is flowering at Bolehall, Tamworth, under the care of Mr. Higginson. It has six spikes of flowers, and the number upon each spike varies from twelve to twenty-four. The owner (Rev. McGregor) is congratulated in possessing such a fine plant. — J. UDALE.

Maxillaria tenuifolia.

I have received a growth and flower of this singular species from a correspondent. It is not by any means a showy plant, but very interesting. The growths occur at short distances apart upon a wiry erect rhizome, so that in a few years it gets out of reach of the compost, and unless lowered in some way becomes weaker annually. Large old specimens grown in baskets become almost pendulous in habit as the rhizomes lengthen and fall over of their own weight, and in this way they have a certain beauty, though from a cultural point of view they would be failures.

To get the best results every one of the rhizomes should have the chance of rooting into the compost, and young specimens formed by cutting up the old plants will always produce the largest growths and flowers. The latter are bright red with yellow markings, and most peculiarly scented. Their odour has been not inaptly likened to that of salt butter. A moist atmosphere and intermediate temperature are best for it, too much heat causing insect attacks. *M. tenuifolia* is a native of Mexico, and was sent home by Hartweg in 1837 to Chiswick, where it flowered for the first time two years later. — H. R. R.



LÆLIA PRÆSTANS ALBA.

NOTES & NOTICES

Rose Analysis.

The Rose analysis yearly prepared for the Journal by Edward Mawley, Esq., an hon. secretary of the National Rose Society, will appear shortly. A very great amount of conscientious labour is necessary to secure such an analysis, which we trust our Rose-loving friends and commercial Rose growers will continue to find of value to them.

New Curator at Kew.

The following particulars appear in the "Kew Bulletin," July-September:—"The First Commissioner has filled the vacancy created by Mr. Nicholson's retirement [from the Curatorship of the Royal Gardens] by the appointment of the Assistant Curator, Mr. William Watson. This officer entered the service of Kew in 1879 as foreman. In 1886 he was raised to the position of Assistant Curator, in charge of the indoor cultivation; this, as Curator, he will still retain. Mr. W. J. Bean, the Assistant Curator in charge of the Arboretum, will now take the general charge of the grounds and of the ligneous collections."

Death of Mr. Thomas Rochford.

Many of our readers will learn with much surprise and the deepest regret of the untimely decease, last Saturday afternoon, October 12, at his abode in Broxbourne, Herts, of Mr. Thomas Rochford, head of the nursery firm there. Mr. Rochford has been a martyr to Bright's disease especially, though a complication of other ills eventually closed his career. He dies at the age of about fifty-four years, though we have been unable to ascertain this fact definitely. Early in life he started in business as a market gardener in his father's nursery and garden at Page Green, Tottenham, London, N. Then he removed to Turnford Hall Nurseries, Broxbourne, which, at present, have an area of some forty acres of glass houses. The quantities of flowers, Grapes, and forced produce annually sent out from Turnford Hall Nurseries is astounding, and the influence of the Rochfords in market gardening circles permeates all over our own kingdom and to America. The late gentleman was a warm supporter of the Gardeners' Royal Benevolent Institution and Gardeners' Royal Orphan Fund for many years. Mr. Rochford's business will be managed by his grown-up sons.

The London Parks.

Following their usual custom at the close of the summer season, the Parks Committee of the London County Council have arranged for distribution of superfluous plants to be made as follows:—Finsbury Park, at the Propagating Yard, near the Manor House entrance gate, on October 23; Kennington Park, at the field adjoining the Night Walk, opposite the entrance to the band stand, on October 18; Southwark, at the Store Yard, near the Lodge entrance gate, on October 22; Myatt's Fields, in the Store Yard, close to the Cormont Road entrance, on October 16; Dulwich Park, at the Store Yard, close to the Dulwich College entrance to the Park, on October 16; Ravenscourt Park, at the Store Yard at the back of the refreshment pavilion, near the Paddiswick Road entrance, on October 18; Victoria Park, at the Store Yard, adjoining the Approach Road entrance, on October 16; Deptford Park, at the Store Yard, close to the new children's gymnasium, on October 16; Victoria Embankment Gardens, at the Villiers Street Section, on October 24; Peckham Rye, at the Store Yard, near Forest Hill Road, on October 16; Sydenham Wells Park, at the Store Yard, on October 15; Brockwell Park, at the Yard, near the Old Garden, on October 16; Royal Victoria Gardens, North Woolwich, at the Frame-ground, near the Lodge, October 22; Waterlow Park, at the Conservatory near St. Joseph's Retreat entrance, on October 24; Battersea Park, at the Yard, near the West Gate entrance, Albert Road, on October 24. The dates of the opening of the Chrysanthemum Shows in the various parks are as follows:—Ravenscourt Park, October 24; Battersea Park, 12; Southwark Park, 12; Finsbury Park, 12; Brockwell Park, 16; Waterlow Park, 19; Victoria Park, 12.

Mr. George Munro, V.M.H.

It will be pleasant news to Mr. Munro's many friends to learn that he is now convalescent after his recent severe illness.

National Dahlia Society.

A meeting of the committee of the above society will be held, by kind permission of the Horticultural Club, in the Club Room at Hotel Windsor, Victoria Street, S.W., on Tuesday, Oct. 29, at three p.m. Business: Next Year's Exhibition.—J. F. HUDSON, HON. SECRETARY.

Presentation to Mr. Black, Smeaton Gardens, N.B.

Quite a pleasant function marked the proceedings at the flower show held lately at Tynninghame, East Lothian. One of the judges on that occasion, Mr. Black, Smeaton Gardens, Prestonkirk, had acted as judge for the fortieth time, and in order to show in a little way how much his services had been appreciated, and at the same time to mark so rare an event, the members presented Mr. Black with a time-piece. The presentation was made by Lady Grizel Hamilton. This humble flower show, which has been of incalculable benefit in spreading a love of gardening among the class for whom it exists, has had an uninterrupted period of prosperity during the fifty odd years of its existence, having been instituted by the late Mr. Thomas Lees. Prizes are also given annually for flower gardens.

Fruit-bottling Appliances.

Messrs. Lee and Co., Knight rider Street, Maidstone, again staged their fresh fruit and vegetable bottling appliances at the fruit show held at the Crystal Palace on October 10, 11, and 12. With these appliances many tons of fruit have been preserved this year already. We annually import enormous quantities of fruit and vegetables. The Board of Trade returns for this year show that 92½ million pounds weight was last year brought from abroad into these islands. We are pleased to learn that the Messrs. Lee and Co. are open to make arrangements with county and parish councils, horticultural, agricultural, gardening, and other societies for practical demonstrations and lectures in the bottling of fresh fruit, milk, &c. The firm use patent air-tight bottles, and preserve, amongst fruits, Plums, Cherries, Gooseberries, Pears, Apples, Currants, Prunes, Damsons, &c. One can thus have a full store of delicious fresh fruits, for dessert or cooking, all the year round.

The Fruiterers' Company and the Lord Mayor.

The Lord Mayor entertained the Court of the Worshipful Company of Fruiterers at a banquet on Tuesday last, after the time-honoured presentation of fruits. According to ancient custom, the company annually presents specimens of English-grown fruit to the Lord Mayor for the time being. The custom has its origin in the fact that the Lord Mayor's Meter was formerly entitled to receive a sample from every load of fruit coming into the City, which practice was the occasion of so much controversy between the collector and the persons bringing in the fruit that the company stepped in and arranged that a present should be made to the Lord Mayor annually. In return the Lord Mayor, at his convenience, gives this banquet, or, as it is recorded in the Entertainment Book at the Mansion House, "Loving Cup or State Dinner."

The Changing Seasons.

The signs of the season are marked in no uncertain way by the sudden transformation of the shrubs and flowers of the parks. Three days ago the sub-tropical gardens in Battersea Park were beautiful with Plumbago, Fuchsia, Eucalyptus, the giant Paulownias and towering Ferns. To-day there are holes where the Ferns grew. The huge pots have been rolled off on rollers on to the flat waggon prepared for them. The Paulownias, which have grown 12ft from the ground since March, are to be cut down level; the beautiful Ailanthus—grown not as trees but as standards—are having their one great shoot clipped off short. The grass is trampled, and the gravel thick with the leaves of the Aspens and Evergreen Oaks, torn by the gale. Official autumn has begun, and in a week or two the autumn substitutes will once more make the trampled lawns and desolated beds look respectable, if not gorgeous. As a final blow to the summer, the bowling green is now forbidden to its elderly votaries.

R.H.S. Fixtures, 1902 (as Provisionally Fixed).

January 14, 28; February 11, 25; March 11, 25; April 8, 22; May 6, 20; Temple, 28, 29, 30. June 10, 25; 26, Holland House. July 8, 22; August 5, 19; September 2, 23; 18, 19, 20, Crystal Palace. October 7, 21; November 4, 18; December 9.

Swanley Horticultural College.

A lecture has been arranged for November 2, to be given at this college by Mr. A. F. Sieveking, on "The History and Literature of Gardens." This will be illustrated by slides, and will be delivered between the hours of four and five o'clock p.m. The Chrysanthemums are then expected to be at their best.

Our Plum Illustration.

We last week gave, on page 343, an illustration of Plum Reine Claude du Comte Hathem. The text was placed on page 340, under the title, "Reine Claude du Comte Atthems." This title was altered to that of the inscription given beneath the illustration, but the corrected proofs were over-laid and never reached the printers. The name best to be adopted is the one first given in this note. We thank the "Horticultural Advertiser" for referring to our handiwork.

Chiswick Gardeners' "Mutual."

The annual general meeting of the above was held in the Council Room, Royal Horticultural Society's Gardens, Chiswick, on Monday evening, October 14. So poorly attended was the meeting that it was decided to call an impromptu gathering immediately after Mr. Massee's lecture, which will take place to-night (Thursday, October 17). The business is the appointment of a new secretary and committee; a spring syllabus will alone be required, as Mr. Massee's lectures on Fungi and Diseases run on till Christmas. Gardeners in and around Chiswick should take the use of these lectures.

Kew "Mutual."

The first meeting of the present session, excepting last week's general gathering, was opened on Monday last, by the new Curator, Mr. William Watson, who delivered a most instructive lecture in the library of the Royal Gardens, his subject being "The Books of the Library." As the members, about forty-five all told, were taken within the library, Mr. Watson was thus enabled to point out and pass round some of the works chosen for notice. He referred to the fact that this Kew bibliothèque once formed an apartment used by Royal personages. For the richness and extent of the collection a large share of honour was due to Miss Marianne North, the sale of whose picture-gallery catalogue had furnished a considerable sum of money, and this the Director used for the buying of books. Loudon's works received particular attention; and Mr. John Aiton ("old Jock Aiton") was not forgotten. At the conclusion of Mr. Watson's pleasant and exceedingly valuable discourse, Mr. William Dallimore proposed a hearty vote of thanks. We should be pleased to receive a few notes from any Kewite who attends the "Mutual," on papers that are of outstanding interest and usefulness.

Leek Show at Innerleithen N.B.

The annual exhibition of vegetables, honey, &c., in connection with the Innerleithen and Traquair Leek Society was held in the Volunteer Drill Hall, Innerleithen, on Saturday. Although the exhibits were not so numerous as in former years, the quality was exceptionally good. There was a very fine show of Leeks, and the competition for the premier prize was keenly contested. The coveted teapot was carried off by Bailie Brydon. Glenormiston exhibitors still hold the place of honour for Potato growing. There was a splendid display of honey, and the first prizes were won by J. Smith, Walkerburn; James Tait, Glenormiston; and James Fairbairn, The Glen. The feature of the show was the competition for the best collection of vegetables, and the various exhibits commanded the attention of the visitors. Mr. James Clark, Glenormiston, carried off first honours with a collection of special merit, his stand being very nicely arranged and was greatly admired. The show was opened by Mr. Ferguson, Pirn House, and was well attended during the afternoon and evening. The judges were Messrs. J. G. Anderson, Kailzie; James Spalding, Peebles; A. Dickson, Glenormiston; J. Boyd and Moffat, Walkerburn, and Mr. James Lennie, Innerleithen.

Great Parisian Chrysanthemum Show.

The exhibition of Chrysanthemums yearly held in the French capital has been definitely fixed for November 6 to 10, in the Grand Palais des Champs Elysées.

Sympathy Gratefully Appreciated.

Mr. Martin John Sutton and other members of the family of the late Mr. Martin Hope Sutton, finding it impossible to answer individually the many hundreds of letters they received from all parts of the country, desire to express their grateful appreciation of the sympathy with them evinced in their recent bereavement.

International Horticultural Exhibition at Mons, Belgium, 1902

This exhibition deserves the earnest consideration of agriculturists, horticulturists, and botanists. It includes meetings of various bodies, who address themselves specially to their own particular phases in the researches on vegetable physiology, or the production of fruits and vegetables. Market gardening, as well as high-class gardening, fruit culture and vegetable forcing, the production of fruits for, and the making of, wines (cider), are some of the principal subjects that will, in conference, be discussed. For the programme address communications to M. Albert Mahieu, secretary, Erquennes, by Dour, Belgium.

The Widening of Piccadilly.

The subject of the widening of the above great West-London thoroughfare was before the London County Council on Tuesday last. The plan of Mr. Akers-Douglas provides for the appropriation of a minimum strip of the Green Park, and for the destruction of a minimum number of trees. Eight Lime trees and little more than half an acre of the park constitute the sum total of the damage. This plan is an instalment of a larger and more ambitious scheme, which contemplates the construction of a series of broad thoroughfares from Holland House to Piccadilly Circus. The cost of the present improvement will be defrayed by £30,000.

French Exhibitions Announced.

Fontenay-le-Comte (Vendée), November 9 and 10: Chrysanthemums, fruits, and vegetables.

Tours, November 9-14: Chrysanthemums and fruits.

Angoulême, November 7-10: Chrysanthemums.

Montpellier, October 31-November 3: General Exhibition.

Paris, November 6-10: Great autumn exhibition.

Lyon, November 23-25: Conference to consider the utilisation of fruits and vegetables, with practical essays.

Douai (North), November 3 and 4: Chrysanthemums.

Amiens, November 8-11: Chrysanthemums, flowers, and vegetables.

Grenoble, October 25-27: Chrysanthemums.

Montmorency (Seine), October 20: Conference on fruits, &c.

Meteorological Observations at Chiswick.

Taken in the Gardens of the Royal Horticultural Society—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. October.										
Sunday ... 6	W.S.W.	deg. 50.6	deg. 49.8	deg. 62.6	deg. 44.5	Ins. 0.17	deg. 54.1	deg. 57.2	deg. 57.4	deg. 38.7
Monday ... 7	W.N.W.	48.7	43.8	54.1	40.5	—	52.2	56.5	57.2	34.6
Tuesday... 8	W.S.W.	48.0	45.8	59.6	41.5	0.04	51.1	55.5	57.0	35.3
Wed'sday 9	W.N.W.	45.3	43.9	59.3	48.0	—	53.5	55.2	57.0	47.0
Thursday 10	S.S.W.	45.9	44.9	58.4	38.3	—	52.3	55.2	56.7	31.5
Friday ....11	N. W.	52.8	51.7	55.1	43.2	—	53.1	55.0	56.4	35.6
Saturday 12	N.E.	51.9	50.8	59.7	46.3	—	53.0	55.0	56.2	39.5
MEANS ...		49.0	47.2	58.4	43.2	Total 0.21	52.8	55.7	56.8	37.5

A severe gale raged all day on the 6th, since which the weather has been calm, dull and misty.



A Preventive for Celery Maggot.

Having suffered badly last season from the attacks of the Celery fly, I have this season tried the effect of spraying the foliage several times with salt water, at the rate of an ounce of salt to 1 gallon of water, and the result has been the leaves have been almost completely free from the pests.—HANTSHIRE.

Early-flowering Chrysanthemums.

It has been said that the Dahlia is the queen of autumn flowers. If that is correct the Chrysanthemum is certainly a princess among them. [The Chrysanthemum is more generally recognised as the "Autumn Queen."—ED.] I recently had the privilege of visiting a show of early flowering Chrysanthemums, held in the Town Hall, Tamworth, where there was a splendid display of them. The exhibits were sent from London, Leicester, Derby, Loughborough, Redhill (Surrey), Lewisham, and the district of Tamworth, the principal exhibitors being Messrs. William Sydenham, H. J. Jones, W. Wells and Co., D. B. Crane, Nadin, Bradshaw, Pemberton, Scattergood, Earp, and Prince. Mr. W. Sydenham inaugurated the exhibition, and achieved complete success. I subsequently had the pleasure of inspecting and noting the beautiful varieties in full flower in the very extensive collection grown by Mr. Sydenham, aided by his pleasant manager, Mr. Allison.

As early flowering Chrysanthemums have come to stay with us, probably a few names of the best varieties I saw in Mr. Sydenham's nursery may be of service to the readers of the Journal who intend to cultivate this easily grown and useful, as well as beautiful, flower.

POMPONS.

Name.	Colour.	Height.
Blanche Colomb ...	Creamy white...	2 feet
Flora ...	Golden yellow	2 "
Madame E. Lefort ...	Terra-cotta	2½ "
Madame Jollivart ...	White	1½ "
Madame Leoni Lassala ...	Creamy white...	2½ "
Mrs. E. Stacy ...	Yellow	1½ "
Mr. Selly ...	Pink	1½ "
Little Bob ...	Crimson brown	2 "
Toreador ...	Orange red	2 "

LARGE FLOWERING OR DECORATIVE.

Name.	Colour.	Height.
Bronze Prince ...	Old gold	3 feet
Crimson Marie Massé ...	Crimson bronze	3 "
Eugène Ferez ...	Crimson	3 "
Eva Williams ...	Terra-cotta	2½ "
George Wermig ...	Yellow	2½ "
Harvest Home ...	Red	3 "
Lady Fitzwygram ...	White	2½ "
Madame C. Desgrange ...	White	2½ "
Madame la Comtesse de Cariel ...	Terra-cotta	2 "
Madame Marie Massé ...	Lilac mauve	3 "
Market White ...	White	2½ "
Mdlle. Guindudeau ...	Deep pink	3 "
Mrs. Squire ...	White	2½ "
Queen of the Earlies ...	White	3 "
Ralph Curtis ...	Creamy white...	3 "
White Grunnerwald ...	White	3 "

The foregoing constitute the cream of the early flowering varieties; other good varieties are later.—JAMES UDALE.

Notes on Early Dessert Apples.

The warm sandy soil on the reclaimed land here suits Apples well. The phosphates it contains, and the maximum amount of sunshine received, add materially to the development of ripened wood and highly coloured fruit. The early Apples especially come to the highest perfection. Beauty of Bath is a strong grower, rather spreading, and is a shy bearer in a young state. Fruit small, but very highly coloured and attractive; flavour third-rate. August.

Lady Sudeley as a pyramidal tree is a good grower, and fruits early. These are large, highly coloured, and attractive, that sell well. They form quite a picture on the tree, and are of fairly good flavour. August.

Irish Peach is a fairly good grower, but shy bearer. Fruit small, and not so attractive as the two preceding varieties; only slightly streaked; flavour good. At local shows this variety

generally takes first, with Lady Sudeley, Red Quarrenden, Morland, or Beauty of Bath coming next.

Morland is a local Apple, largely grown in cottage gardens, coming in at harvest time, and is very good when picked from the tree. It is of medium size, greenish yellow, and slightly streaked.

Worcester Pearmain is a well-known market variety, and does well. It matures early, and is very prolific. The fruit is bright red, and of good size, juicy, and of very fair flavour. End of August.

Devonshire Quarrenden is a very popular South of England variety. As a tree it is a good grower, and very prolific. Fruit dark red, very firm flesh, and of good flavour. August and September.

The reputation of this highly flavoured American dessert Apple, Washington, reached me, and I thought I would try it. As a pyramid on this warm soil the tree did not make much growth. It is now about 3ft high, with about six branches, and these have borne about three dozen beautiful fruit this year, in colour resembling the Duchess of Oldenburg; but the fruits are of firm, solid flesh. The two previous years I secured a few. The flavour is delicious; in fact, is all that can be desired in an Apple, and if it will stand our ordinary climate it will be a valuable addition to our dessert fruits. Its season is September and October.—C. ORCHARD, F.R.H.S., Bembridge, Isle of Wight.

A Visit to Osborne.

Nothing affords me greater pleasure, living as I do near town, than to run into the country. An excursion ticket recently took me to Cowes, then crossing over the floating bridge, I wended my way to the Royal Gardens, Osborne. At the entrance gates I found Mr. Nobbs, the able gardener, who has had charge of the gardens some nine years. From the main entrance there is a lovely drive about one mile in length, which brings you to the palace, where, at the front entrance, are five specimen Cedars. We soon came to the entrance of the fine walled-in kitchen gardens. The wall fruit has been plentiful, though Apples and Pears were scarce. Walking through the stove house some grand and well-coloured Codæums were observed. Palms from 2ft to 8ft were also in good condition. Begonia Gloire de Lorraine is specially well grown, and Orchids were all in good condition.

Coming now to the long lean-to house of Chrysanthemums, about 400 are grown on the single bud system. The plants that were struck in April are about 2ft 6in high, and promise to furnish good blooms. The foliage is stout, and clothes the stems from the bottom of the pots; the buds are all well timed. I noticed the Japanese Australie, M. L. Renny, Mrs. Coombes, Mrs. W. Popham, Mme. Gustave Henry, Countess of Ellesmere, Lionel Humphrey, Nellie Pockett, Swanley Giant, Oceana, H. J. Jones, Miss A. Byron, E. Molyneux, Edith Tabor, W. H. Lees, Mrs. Darby, Mme. Von Andre, Baden Powell, and Mrs. G. Mileham, and in the best possible state. Good culture has left its mark, and I hope to see Mr. Nobbs come to the front at Southampton and other great shows. Great credit is due to him for the state the gardens now appear in.—BALHAM.

Acacia alata.

This pretty Leguminous plant is in flower at the present period, carrying upon its winged and tortuous green stems the golden yellow, solitary heads of flowers which prove so very attractive. The broad wings of the stems are distinctly characteristic. As a plant it grows with gratifying vigour when placed in a peat and loam compost, which must also be open, free, and friable. The species is probably better known under the name *A. platyptera*, but "*alata*," i.e., "winged," is the name adopted by the "*Index Kewensis*." It grows in bushy form, attaining a height of 2ft, or a little over. It was introduced from the Swan River region of Western Australia, to which continent the Acacias belong, in the year 1840. As a greenhouse plant it might be far more liberally cultivated, for, as we say, it is both very distinctive and beautiful, besides yielding flowers at a most timely season.

A Fungus Foray.

The glades and copses of Epping Forest were invaded on Saturday by naturalists in search of fungus in all its varieties, of which they succeeded in discovering 170. The Essex Field Club, with a contingent of the Selborne Society and friends from all parts of the country, raided the Forest near High Beech, and in the evening gathered the spoil together on many tables. Many of the species had not been found in the Forest before, although the Essex Club has been searching for twenty-one years. Dr. Cooke, a veteran expert, Mr. Massee, of Kew, and Professor Marshall Ward, of Cambridge, discoursed on fungi, Professor Ward describing the methods adopted to cultivate fungi in the Cambridge University laboratory.

Ashton Court, Bristol.

To the citizens of Bristol, Ashton Court has long since become a familiar name through the kindly disposition of the owner, Sir J. H. Greville Smythe, Bart., allowing all and everyone who cared to journey thither on days set apart during the summer months to inspect the extensive and well kept gardens, and which has enjoyed a reputation for so many years. My recent visit was the first paid during an interval of some twenty years. Then Mr. Austin was the superintendent, and his reputation, acquired largely by his success as an exhibitor of high-class fruit and vegetables, remains still quite fresh in the memories of those who knew him either intimately or by name only. Many changes have been experienced since that time, but the reputation of these gardens, then so loudly praised, are not one whit the less praiseworthy now. Mr. Noble, Sir Greville's present gardener, has, during the several years' charge, earned for himself the good-will of those with whom he has been brought into contact, and the publicity generously allowed by the owner naturally brings the gardens and their superintendent into touch with persons of all ranks and creeds. During the summer months many hundreds pay an annual visit of inspection, and, if I mistake not, charitable institutions, gardening and otherwise, benefit thereby.

The Court is of palatial proportions, and its dignity is added to by the vast extent of park-land in which it stands, together with the wealth of timber and ornamental trees, its fine commanding position, and extensive landscape views and lawns. The entrance lodges, too, are not of the primitive order, but are commodious and well appointed, provided even with hydraulic attachment for the opening and closing of the gates, and automatic bell signals given by approaching vehicles passing over road plates.

The acreage of the pleasure grounds is somewhat considerable, and are made to appear much more so by reason of the undulating nature of the park-land with which they are surrounded. There is also an extensive range of glass structures for the growth of decorative plants for the house, as well as Grapes and other fruits, a lofty conservatory attached to the Court being kept gay with permanent and pot-grown plants. The winter garden, a creation of recent years, out of what was once an open court-yard, is an elaborate apartment much used for reception and other purposes. This has some extremely handsome Palms planted in prepared beds, which, with groups of other plants artistically arranged, convey quite a tropical aspect.

The main garden entrance opens into this fine apartment, which makes it secluded and private, because unseen from outside. In the main range of glass here, a commodious stove-house contains great

quantities of beautifully coloured and well grown Codæums, which are largely drawn upon for winter furnishing. Calanthes and Cœlogynes, too, are grown in quantity for cutting, as are other stove and greenhouse plants. Cool house Orchids and Ferns fill a long lean-to house having a north aspect.

Flower gardening is the feature here; the great extent of beds to be filled requires many thousands of plants in their endless variety. Carpet bedding, so much in fashion twenty years since, has lost some of its charm and necessity of that period, Lady Smythe preferring floral rather than picture effects in foliage. Begonias and flowering Zonal Pelargoniums are largely employed with telling effect, great beds filled with masses of selected colours being very fine. With such a vast open tract of park and tree land in the near and distant

landscape, this wealth of flower finds ample atonement, and is not in the least degree overdone. Carpet bedding, it must be said, is not entirely superseded by the freer style of planting, but instead of occupying the most conspicuous positions it is relegated to the outer boundaries of the garden, where it seems very agreeable and well placed. Subtropical bedding cannot be successfully adopted by reason of the violence of the summer gales, which strip the leaves of Cannas, Ricinus, and plants of a like nature into shreds. With sufficient shelter to allow of this style of summer bedding a splendid tropical aspect might be imparted, the nature of the surroundings being so well fitted. Rhododendrons, Roses, and other flowering shrubs are being planted in bold groups about the grounds, which in their season must have a telling effect viewed from the higher ground.

Separate staffs of men, with a responsible foreman, control the flower and kitchen gardens, and are situated at some distance one from the other. Fruit and vegetables have a considerable area set apart to meet the large demand, and the glass department is of like proportion. Fruit outdoors is grown in considerable quantities, and Mr. Noble, though respectful to veterans of the past, displays a marked appreciation for young trees in order to secure fine fruit of the best quality and variety. One wall with a southern aspect, quite 400 yards in length, was filled with Peaches and Nectarines, and while some of these have the protection in spring of overhead copings and nets, there are others that go unprotected. At the time

of my visit one could not distinguish between the two, the health of the trees and extent of the crops being all that could be desired. The Plum walls are fast becoming filled with young, well trained, and fruitful trees, and the sample all of high standard quality. Pears, too, were equally satisfactory, both on walls and in bush form. To give a comprehensive list of kinds planted would serve no useful purpose, it being sufficient to say that all the most popular and best are represented, and not in solitary numbers.

The walled garden has the paths bordered with large specimens,



ACACIA ALATA. (See page 352.)

capable of carrying great quantities of Apples and Pears; an outer garden devoted to vegetables is closely intersected with lines of sturdy specimens of bush Apples. Quite an exhaustive selection of these have been planted by Mr. Noble, in many instances these have replaced trees that from age and other causes had ceased to be profitable. It would not be easy to estimate the annual output from these in the course of a few years hence, especially as Mr. Noble carefully attends to those in winter time which are predisposed to leaf growth rather than fruit production, and maintains a reserve store from which to draw upon in the case of any that are not of the desired standard and are rejected. Bush fruits flourish only, as might be expected. Raspberries had wonderful canes, and this high state is maintained by periodic removals to fresh soil. Strawberries give excellent crops in their season, and forced stock occupying pots were remarkable for their vigour of foliage. The red soil of these gardens would seem unusually rich in fruit-productive elements, the only crop that seemed to languish being Morello Cherries. These are having attention paid them, and it is anticipated will rise to the same position as all other occupants of this fertile garden.

The glass department, like the outer garden, is extensive, and give of their fulness for each season. Here fruit preponderate, though flowers of some kinds find a home. Grapes occupy several large structures, the earliest, which were formerly obtained from pot Vines, now being grown from permanent rods in a smaller house. Muscats, which are a favourite Grape, are being extended largely. Hamburgs, too, are grown in quantity for the summer months. Later sorts include Alicante, Alhwick Seedling, Appley Towers, Lady Downe's, and Gros Colman, and of these there were a good supply of well advanced and finished bunches. The principal range of vineries are large roomy structures, capable of giving a large yield, and they, being comparatively young, will improve with age. A long range of Peach houses are furnished on the cross-trellis system of planting, but the width do not permit of this principle being carried out to perfection. However, the best is made of it by root curtailment, and good crops of fine fruit realised. Nectarines were unusually bright coloured, both in these houses and on the open walls, showing clearly that the natural soil suited them well. Pines were formerly grown to great perfection, but, as in many other gardens nowadays, their culture has been given up, and their places taken up by Melons, Tomatoes, and Cucumbers and additional space devoted to decorative plants.

Tomatoes are grown somewhat extensively outside, and the crops were abnormally heavy. Melons having firm skins, such as Gunton Scarlet and Hero of Lockinge, are those which find most favour, because of the long journeys—750 miles—they have to travel, when the family remove to Scotland. There are extensive ranges of pits for the forced growth of spring fruit and vegetables and the propagation of bedding plants, which is a large item to deal with. Vegetables and border flowers show that in Mr. Noble they have a master hand, fully alive to their importance, and the necessity of an inexhaustible supply, and the neatness and good order everywhere prevailing was not one of the least striking features of this princely domain. Due recognition is paid by a generous employer to one who by aim and effort strives to deserve it in the honourable discharge of duty.—W. S.

House Culture of the European Grape.

The time will probably come, in America, when the European Grape will again be a valuable commercial fruit, as it was at one time, the fruit selling readily at \$1½ a pound. The cultivation went down for several reasons, among them the fear of competition with the outdoor-grown European Grapes from California, the injury to the roots by the phylloxera, and the difficulty of getting the intelligent labour to manage the Vines properly. It is clear, however, that no more fear of competition with the California product need be feared than with the Spanish Grapes that come in barrels of cork dust from the Old World. These are very good in their way, and will usually bring remunerative returns, though the figures be small. There is no comparison between these in quality as compared with those grown under glass by one who knows his business. This has been abundantly proved in England. The Spanish Grapes come to England, and are sold by auction by the 10,000 barrels at a time, and bring no more than 6d. or 9d. a pound in the famous Covent Garden Market, while the home-grown Muscats and Black Hamburgs bring comparatively enormous prices. In America, says "Meehans' Monthly," it was once thought to be absurd to try to raise Tomatoes at a profit under glass in winter, on account of the shipments from Florida and the West India Islands. But it has been found a profitable business of late years by reason of the superior quality of the home-grown article.

Pear Michaelmas Nelis.

Four splendid fruits of this new September Pear were sent a week ago by Messrs. George Bunyard and Co., of Maidstone, who are the distributors of this richly flavoured and juicy dessert variety. In size the fruits are small but shapely, and are borne freely on robust wood. "It was sent out last year (1900); there is no other so good in its season."

British Grown Fruit.

Crystal Palace, October 10th, 11th, and 12th.

In many of the classes for single dishes of Apples at last week's great fruit show, a very considerable shrinkage in the number of entries was apparent when one came to consider the present with last year's exhibition. The season has been an uncertain one; true, there has been sun enough to give colour, and yet even in this respect we have seen very much brighter samples than, on the average, was staged within the Crystal Palace on the latest occasion. Grape entrants, too, were fewer in number, if we except the market exhibits from Jersey. No one, however, was found who did not cordially agree that never was all-round better quality apparent. Both in Pears and Apples there were some extraordinary samples exhibited, pictures indeed, in form, appearance, size, colour, and general refinement. The correct names of varieties were, almost without exception, affixed by the numerous exhibitors, a fact which was remarked upon at the luncheon provided by the Council on the first day of the show by Mr. W. H. Divers. Our good friend contrasted the state of affairs, so far as names are concerned, with what obtained ten or a dozen years ago. At that time there was great confusion in nomenclature, and one of the happiest results that has crowned the continued labours and expenditure of the Royal Horticultural Society in these shows lies in the accuracy that now characterises the fruit collections that yearly are presented.

In conversation with a highly esteemed friend at the show, he expressed a desire that some restrictions could be devised whereby the gardeners who annually "sweep the boards," more especially in the single-dish classes, would find their entries penalised! He contended that where a grower has soil, situation, sun, and "strength" in his favour, he virtually excludes the thousands of other fruit-growers who have not these blessings. Of course, where classes are "open," this sentiment could not be allowed.

Last year we referred to the scarcity of prizes in many of the classes; this year there is no improvement. Really, for the sake of encouraging the supporters of the show—those who yearly exhibit in a few classes in a genuine spirit of competition, and who, moreover, bring good fruit—there ought to be more than a couple of prizes offered where perhaps a dozen, eighteen, or twenty dishes of the variety are staged.

The Jersey fruit was again to the fore, but large, dull, and, to our judgment, coarse, as hitherto. The growers who exhibited the market Grapes furnished a very interesting feature. These were in baby baskets, as sent to market. The boxes used for the transit of these baskets are also objects of merit. They are made of various sizes, stout, and square. The inside is in tiered shelves, upon which the baskets are placed, and the shelves are so spaced that the handles of the baskets press against the shelves above them, and thus destroys all chance of shifting. Boxes are made to hold a certain exact number of baskets, some for sixteen, others twenty-four, and the largest contain thirty-two baskets, each basket with four or five pounds of Grapes.

Though there were no cards warning visitors not to handle fruit, it was very pleasing to observe how few were the numbers who took this liberty. It is certainly a demand upon one's power of restraint at times to check the desire to handle, especially when the samples are being discussed with an enthusiastic critic; but to systematically lift, feel, weigh, and perhaps press the fruits, on all the tables, as we saw one or two thoughtless persons doing, is most seriously to be deprecated.

At the friendly luncheon, on Thursday, the 10th inst., the secretary to the society, Rev. W. Wilks, genially presided. He was in his usual cheerily humorous mood, and acted ably. Mr. Robert Fenn, well-known to "Journal" readers, was the honoured guest at table, and a special toast was given to him. The old gentleman is in his eighty-fifth year, and the recognition at last given to him by the Royal Horticultural Society, even if it is so little as this, will go down as one of the society's most kindly acts, and many, including old Robert Fenn himself, will be happy to remember the Fruit Show of 1901. The judges, referees, and some friends were photographed by Russell's folk after luncheon, and we are proud to be able to present the group, as photographed, in one of our central pages (357) this week. The names of the gentleman will be found on the portrait page.

OPEN TO GARDENERS AND AMATEURS ONLY.

Collections of Indoor Fruits.

Great interest is always evinced in the class for a collection of nine dishes of ripe dessert fruit, six kinds at least. On this occasion there were four contestants. Here Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, proved the victor with a grand exhibit, which included a fine Queen Pine, superb Madresfield Court and Muscat of Alexandria with large noble bunches, almost perfect in berry and colour; Melon Taunton Hero; a splendid dish of Marguerite

Marillat Pear, Sea Eagle, and Princess of Wales, large, well coloured, and in splendid condition; Victoria Nectarine, large and perfect, and a good dish of Cox's Orange Pippin Apples, a praiseworthy exhibit. The second prize was awarded Mr. G. Mullins, gardener to Lady Henry Somerset, Eastnor Castle, Ledbury, who staged strongly in Muscat of Alexandria and Gros Maroc Grapes, a fine Countess Melon, Pears Pitmaston Duchess and Beurré Superfin, well-coloured Apples, Ribston Pippin and Cox's Orange Pippin, with Golden Drop Plums and Princess of Wales Peaches; the third place being awarded to Mr. Jas. Lock, gardener to C. Swinfen Eady, Esq., K.C., Oaklands Lodge, Weybridge, his Grapes, Pears, and Apples being most noteworthy.

The smaller collection of six dishes of ripe fruit only brought out three competitors, a rather surprising fact. The first prize was awarded to Mr. F. Cole, gardener to Sir Charles Russell, Swallowfield Park, who staged good bunches of Cooper's Black and well-coloured Muscat of Alexandria Grapes; Epicure Melon, Lady Palmerston Peaches in good form, rather small Brown Turkey Figs, and a good dish of Coe's Golden Drop Plum. The second prize fell to Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, who had well coloured Alicante, Beurré Bosc and Beurré Superfin Pears; while Mr. J. Sparks, gardener to R. Beddingfield, Esq., Grove House, Roehampton, was third with Gros Maroc Grapes and Pitmaston Duchess Pears as the chief features.

Grapes.

The large Grape class, consisting of six distinct varieties, three bunches each, both black and white, in which the Challenge Cup presented by Messrs. W. Wood and Son, of Wood Green, forms the first prize. Strange to say, and sad also, is the fact that only one competitor staged, Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby who was awarded the cup. The exhibit was in every way worthy of it, for the bunches were large and well coloured, the varieties being Madresfield Court, grand in berry and bunch; Black Hamburgh, a trifle "foxy"; Barbarossa, well coloured and of gigantic size; Muscat of Alexandria, fine in berry and a good golden amber; Gros Maroc, perfect in berry and bloom, very fine samples, and Black Alicante, large well-coloured bunches, but a trifle small in berry.

For three distinct varieties, three bunches each, three competitors staged. Mr. W. Shingler, gardener to Lord Hastings, Melton Constable Hall, Norfolk, won handsomely with superb samples of Gros Colman in splendid order, the berries were large and of excellent colour; Black Alicante, enormous bunches of good shape and well finished; Alnwick Seedling, good both in berry and finish. Mr. W. Camm, gardener to Captain Forester, Battle Abbey, Sussex, made a good second with Mrs. Pince, small in berry, but large in bunch, good amber-coloured Muscat of Alexandria, and shapely examples of Black Alicante; and Mr. F. Cole third with good bunches, but rather small in berry.

For three bunches of Black Hamburgh there were seven entries, most of them good. Here Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, was awarded first prize for three medium sized bunches, good in colour and finish. Mr. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth Manor, Romsey, was second with well finished bunches, and the third prize to Mr. J. H. Goodacre for bunches lacking in colour. Mrs. Pince only called out two stands, both of them fairly good; Mr. W. Mitchell scored with good bunches, rather small in berry, and lacking in finish, while Mr. W. Camm brought up the rear with bunches small in berry. Black Alicante was represented by four splendid exhibits. Mr. W. Shingler was placed in the first position, three shapely bunches splendidly finished. Mr. W. Mitchell followed with grandly coloured examples, a little lighter in weight to the winner, and Mr. F. Cole made a good third with large bunches.

White Lady Downe's was honoured by seven exhibits, most of them of a satisfactory character. The first prize fell to Mr. H. H. Brown, gardener to G. C. Raphael, Esq., Castle Hill, Englefield Green, who had long tapering bunches well finished, but would have been greatly improved with better thinning. Mr. W. Mitchell was placed second with much smaller bunches of excellent colour.

The class for any other black Grape called forth three contestants, Mr. W. Shingler winning with superb bunches of Alnwick Seedling, the bloom and finish being almost perfect. Mr. W. Taylor followed with good bunches of Madresfield Court, carrying a good deep bloom, and the third position by Mr. J. H. Goodacre with large bunches of Madresfield Court which lacked colour. For three bunches of Muscat of Alexandria there were five entries. The first prize was awarded to Mr. F. Cole, who had large, well-coloured bunches, Mr. J. H. Goodacre following with samples lacking somewhat in colour, and the third prize was taken by Mr. W. Shingler for large bunches of glorious colour, but unshapely. For any other white variety there were three entries, and Mr. J. H. Goodacre took premier award with fair bunches of Chasselas Napoleon. Mr. F. Cole followed with fine bunches of Foster's Seedling, and Mr. W. Taylor was third with Chasselas Napoleon.

Collection of Hardy Fruits.

For a collection of hardy fruit grown entirely in the open air to comprise forty dishes, not more than eighteen dishes of Apples or twelve of Pears, there were three collections staged. Mr. R. Potter, gardener to Sir Mark W. Collet, Bart., St. Clere, Kemsing, Sevenoaks, secured the premier award for a collection in which the Apples and Pears were excellent. The former comprised good examples of Cox's Pomona, Newton Wonder, Golden Noble, Warner's King, Gloria Mundi, Lady Henniker, Bramley's Seedling, Lord Derby, and Washington. The best dishes of Pears were Durendeu, Beurré Bachelier, Princess, and Marie Benoist. Plums included good examples of Grand Duke, Bray's Green Gage, and Golden Drop, while the remainder of the dishes included Shepherd's Bullace, Brown Turkey Figs, Lady Palmerston Peaches, Cob Nuts, and Farleigh Damsons. Mr. W. H. Divers, gardener to the Duke of Rutland, Belvoir Castle, Grantham, was second with good dishes of Apples, Peasgood's Nonesuch, Warner's King, The Queen, Ribston Pippin, St. Edmund's Pippin, and Barnack Beauty; good examples of Belle de Septembre and Archduke Plums; Red and White Currants, and Morello Cherries; while Mr. E. Coleman, gardener to T. L. Boyd, Esq., North Frith, Tonbridge, was a good third, the Apples and Pears being praiseworthy.

Orchard House Fruit.

For a collection of hardy fruit, twelve dishes distinct, grown partly or entirely under glass, to illustrate orchard house culture, there was but one exhibitor, surely a bad falling off, though the exhibit staged by Mr. R. Potter, which secured the first prize, was well worthy of the position; but where are the other orchard house competitors? The Apples were Warner's King and Washington: the best Pears General Todleben, and Princess Decaine and Grand Duke Plums, also Rond Noir Figs in good condition.

Open Air Fruit.

Apples.

All the fruit shown in the following classes was from the open air, and as an instance of what really can be done when growers try, it was a most useful and valuable exhibition. Class 32 in division 4, open to gardeners and amateurs only, for twenty-four dishes of Apples, in distinct varieties, sixteen cooking and eight dessert, the latter placed in the front row, brought forth four entrants, and of these Mr. George Woodward, the redoubtable fruit-grower and gardener to Roger Leigh, Esq., at Barnham Court, Maidstone, was clearly first. His samples were all massive and even, in most cases finely coloured, and the varieties had been well chosen. Emperor Alexander, Belle Dubois, Peasgood's Nonesuch, and a few other dishes were exceedingly large and handsome; while amongst the more telling of his dessert samples were Washington, which was most excellently represented; Gascoyne's Scarlet, Allington Pippin, and the Wealthy Apple, the latter two dishes being pictures of excellence. Mr. W. H. Bacon, gardener to Sir M. Samuel, Mote Park, Maidstone, came second. A few of the finer dishes were those of Baumann's Red Reinette, Blenheim Pippin, Allington Pippin, Warner's King, Peasgood's Nonesuch, and New Hawthornden; Mr. W. E. Humphreys, gardener to A. H. Smee, Esq., J.P., The Grange, Hackbridge, Surrey, followed third, but was many points behind his near neighbour, Mr. Woodward. He had splendid dishes of Cellini and Wealthy.

The twelve dishes of Apples, consisting of eight cooking and four dessert, Mr. R. Potter, gardener to Sir Mark W. Collett, Bart., St. Clere, Kemsing, Sevenoaks, led off; followed by Mr. R. Parker, gardener to the Duke of Richmond and Gordon, K.G., Goodwood, Chichester; Mr. T. Neale, gardener to C. J. Startup, Esq., West Farleigh, Kent, came third. It is only necessary to state that the collections were thoroughly up to the standard obtained at past shows. The first prize was awarded for nine dishes, six of cooking and three of dessert, to Mr. H. Davis, Quarry House, Newent; the Lady Superior, Madame Stuart (gardener, Mr. A. Smith), The Convent, Roehampton, S.W., second, beating H. C. Smith, Esq., (gardener, Mr. W. Wallace), Mount Clare, Roehampton. Mr. Davis' lot included the following:—Mrs. Barron, Emperor Alexander, Peasgood's Nonesuch, Warner's King, Mère de Ménage, Ribston Pippin, Lord Derby, Worcester Pearmain, Cox's Orange Pippin.

Mr. George Woodward had a most impressive collection of six dishes of cooking Apples. His samples of Belle Dubois were of enormous size, though quite green; the other dishes were Peasgood's, Alexander, Bismarck, Stone's Apple, and Warner's King. Out of three entrants Mr. R. M. Whiting, Credenhill, Hereford, came third. The lesser class, for three dishes of cooking Apples, found Mr. G. Lock, gardener to B. H. Hill, Esq., Newcombes, Crediton, Devon, in the first place; Mr. T. Neale following second. This entry contained a wrong card, evidently the mistake of the exhibitor; seven entered.

For six distinct dishes of dessert Apples, Mr. George Woodward again stood foremost with Scarlet Pearmain, Washington, Cox's Orange, Ribston Pippin, Wealthy, and Allington Pippin. Two prizes were awarded as equal seconds to Mr. T. Neale, and also Mr. G. Lock. The latter two sets required most careful

pointing before a decision could be arrived at. The thirty-eighth class brought out ten exhibits of three dishes each of dessert Apples. Mr. W. H. Davis beat R. M. Whiting, Esq.

Pears.

Mr. George Woodward was as unapproachable in Pears as he had proved to be in the classes devoted to Apples. In class 39, for eighteen dishes, distinct, he was far and away the foremost exhibitor, with massive and juicy-looking samples of Boussoch, Beurré Alexandre Lucas, Pitmaston Duchess (perfectly superb), Duchesse d'Angoulême, Marguerite Marillat (amongst the finest samples we ever saw), Doyenné du Comice, Emile d'Heyst, Beurré Superfin, Beurré Baltet Père, Durondeau, Beurré Diel, Conseiller de la Cour, Passe Crasanne, Marie Louise d'Uccle, Directeur Hardy, Beurré Hardy, Princess, and Magnate. Certainly the dishes to take the public eye were those we have given special mention to, and that of Beurré Hardy, which is a grand Pear. Mr. George Grigg, gardener to the Earl of Ashburnham, Ashburnham Place, Battle, was second, and though good was considerably behind his right-hand neighbour. The class secured five fine entries, representing in all ninety dishes of the choicest Pears.

For half the amount of dishes in the succeeding class Mr. William Jones, gardener to R. C. Brougham, Esq., Wallington Bridge, Carshalton, led off, being followed next by Mr. J. W. Park, gardener to H. Partridge, Esq., Castle Hill, Bletchingley, Surrey. An entry in this class from Mr. A. Basile compared handsomely with the prize-winners, yet it was left without any recognition. For six dishes, distinct, Mr. W. Naney, gardener to A. Benson, Esq., Upper Gattton Park, Merstham, with lovely fruits of Pitmaston Duchess, whose clear yellow skins were as smooth as a cherub's cheek. Mr. A. Smith, gardener to the Lady Superior, Rochampton, followed as a fair second. Kent yet held sway in class 42, for three dishes of dessert Pears, Mr. R. Edwards, gardener to C. A. Morris Field, Esq., Beechey Lees, Sevenoaks, being the premier prize-winner, and Mr. W. A. Cook, from Compton Basset, Calne, Wilts, second. It was very apparent that the greatest skill and care had been laboured on the production and staging of the fruits in these classes, and those who were in the honoured ranks as prize-winners should feel proud indeed.

In the class for six dishes, distinct, selected from a number of varieties stated in schedule, but of no interest to our readers, there were three entries, and the first prize was taken by Mr. George Woodward with a capital exhibit of clean, well-developed samples, the varieties being Marie Benoist, Beurré Rance, Le Letier (good), Passe Crasanne, Easter Beurré, and Doyenné d'Alençon. Mr. T. Challis, gardener to the Earl of Pembroke, Wilton House, Salisbury, was second with Doyenné d'Alençon, Easter Beurré, and Beurré Rance as his best dishes.

There were ten entries in the class for three dishes of cooking Pears, a capital entry of really good produce, but Mr. G. Woodward proved invincible with grand dishes of General Todleben, Beurré Clairgeau, and Catillac, the second place being awarded to Mr. W. P. Bound, gardener to J. Coleman, Esq., Gattton Park, Surrey, who staged good Uvedale's St. Germain and Beurré Clairgeau.

Peaches, Nectarines, Plums.

There were ten entries for a dish of Peaches. Here Mr. J. H. Goodacre was placed first with a grand dish of Sea Eagle, followed by Mr. W. Simpson, gardener to R. C. Forster, Esq., M.P., The Grange, Sutton, with Lady Palmerston. Needless to add, several good dishes were left without recognition.

Nectarines came out with only two dishes, Mr. J. H. Goodacre securing the first prize with a good dish of Victoria, and Mr. J. Sparks second with a poor example of the same variety.

For a dish of dessert Plums there were eleven entries, which must be considered good at this late period. The first position was awarded to Mr. J. Vert, gardener to Lord Braybrooke, Audley End, Saffron Walden, for a fine dish of Coe's Golden Drop, and the second to Mr. J. Challis for the same variety. The cooking Plums mustered nine entries, and the first prize was awarded to Mr. R. Smith, gardener to Mrs. G. Pearson, Brickendonbury, Hertford, for a grand dish of Monarch, Mr. J. H. Goodacre following with good yellow Magnum Bonum.

Special District County Prizes.

OPEN TO GARDENERS AND AMATEURS ONLY.—In the first of these classes for six dishes of Apples, four cooking and two dessert, the first award of £1 fell to Mr. W. T. Stowers, gardener to G. H. Dean, Esq., Whitehall, Sittingbourne, with exceedingly creditable specimens; the same grower won in the section of the same class devoted to Pears.

OPEN TO GROWERS IN SURREY, SUSSEX, HANTS, DORSET, SOMERSET, DEVON, AND CORNWALL.—Entry same as in preceding class. First, Mr. G. Lock of Newcombe; second, Mr. T. Turton, gardener to J. K. D. Wingfield, Esq., M.P., Sherborne Castle, Dorset. Here there were nine entries. Mr. Turton was first for Pears, and Mr. G. Lock second.

OPEN TO WILTS, GLOUCESTER, OXFORD, BUCKS, BERKS, BEDS,

HERTS, AND MIDDLESEX.—For Apples Mr. W. H. Davies, gardener to A. W. S. Wright, Esq., led off with some very fine samples, evincing elaborate care in the culture of them; followed for second by Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, Maidenhead, with some good dishes, specially fine being Warner's King. There were five entries of Apples, and ditto of Pears, for which Mr. W. H. Bannister, gardener to Mrs. Ames, Cole House, Westbury-on-Trym, obtained highest award. The dishes of Beurré Hardy and Doyenné Boussoch were superb examples. Mr. W. A. Cook, Compton Basset, was a fair second, but his fruits had evidently missed at least one-third of the sunshine that Mr. Bannister's had received.

OPEN TO ESSEX, SUFFOLK, NORFOLK, CAMBRIDGE, HUNTS, AND RUTLAND.—The difference in quality in the fruit from these further north counties was at once apparent; the colour was just slightly duller, and there was a discrepancy in size on the average. Hamilton H. Hernard, Esq., Gurney's Manor, Hingham, Norfolk, led for Apples; no second. Lord Braybrooke (gardener, Mr. J. West), Audley End, Saffron Walden, was beaten by Col. Archer Houlblon (gardener, Mr. W. Harrison), Hallingbury Place, Bishops Stortford, for six dishes of Pears, both staging some fine specimens.

OPEN TO LINCOLN, NORTHAMPTON, WARWICK, LEICESTER, NOTTS, DERBY, STAFFS, SHROPSHIRE, AND CHESHIRE.—Here John Lee, Esq., was first for Apples, and Mr. W. H. Divers, gardener to the Duke of Rutland, K.G., Belvoir Castle Gardens, Grantham, first for Pears.

OPEN ONLY TO WORCESTER, HEREFORD, MONMOUTH, GLAMORGAN, CARMARTHEN, AND PEMBROKE.—In the class for six dishes of Apples there was but one entry, and that from Mr. R. M. Whiting, Credenhill, Hereford, who was awarded first prize with good examples of Peasgood's Nonesuch, Lord Suffield, Stirling Castle, Tyler's Kernel, Cox's Orange Pippin, and James Grieve, good. For Pears there were two entries, of good produce. Mr. J. Rich, gardener to G. H. Hadfield, Esq., Moraston House, Ross, was first with a grand exhibit, the varieties being Pitmaston Duchess, Beurré Hardy, Grosse Callebasse, Doyenné du Comice, Louise Bonne de Jersey, and Conseiller de la Cour; Mr. J. E. Jones, gardener to H. L. Lutwyche, Esq., Kynaston, Ross, being second with good dishes of Duchesse d'Angoulême, Doyenné du Comice, and Pitmaston Duchess.

OPEN TO THE OTHER COUNTIES OF WALES.—In the class for Apples there were four exhibitors, and the first prize was well won by Mr. H. Forder, gardener to Col. Cornwallis West, Ruthen Castle, N. Wales, who staged a satisfactory exhibit, utilising Ecklinville Seedling, Warner's King, Peasgood's Nonesuch, Striped Beaufin, Worcester Pearmain, and American Mother. Mr. R. D. Hughes, 35, Middle Lane, Denbigh, was second with a fair exhibit. Pears were represented by two exhibits, Mr. F. Fox, gardener to Mrs. David Evans, Highmead, Llanybyther, S. Wales, who staged good dishes of Doyenné du Comice, Durondeau, Beurré Hardy, Glou Morceau, Beurré Rance, and Beurré d'Amanlis; while Mr. H. Forder was a capital second, his best dishes being Pitmaston Duchess and Souvenir du Congrès.

OPEN ONLY TO THE SIX NORTHERN COUNTIES OF ENGLAND AND IN THE ISLE OF MAN.—In the class for Apples there were three entries, and the first prize was well won by Mr. C. Portsmouth, who had good dishes of Lady Henniker, Blenheim Orange, Alfriston, Northern Dumpling, King of Pippins, and Worcester Pearmain. Mr. J. Sarside, Larbeck Gardens, Great Eccleston, Garstang, was second with good dishes of Tower of Glammis, Mère de Ménage, and Peasgood's Nonesuch. Four competitors staged collections of Pears, but Mr. J. Melndoe, gardener to Sir J. Pease, Hutton Hall, Guisboro', was placed first with Marie Louise, Beurré Diel, Beurré Bachelier, Pitmaston Duchess, Beurré Hardy, and Louise Bonne de Jersey; while Mr. W. Church, gardener to H. Thellusson, Esq., Brodsworth Hall, Doncaster, was second with good dishes of Pitmaston Duchess, Beurré St. Quentin, and Gansel's Bergamot.

OPEN ONLY TO SCOTLAND.—A good entry was made here for Apples by five exhibitors. Mr. C. Webster, gardener to the Duke of Richmond and Gordon, Gordon Castle, Fochabers, who had satisfactory examples of Newton Wonder, Peasgood's Nonesuch, Bismarck, Warner's King, James Grieve, and Worcester Pearmain; and Mr. J. Culton, gardener to C. A. Phillips, Esq., Dildaron Castle, Douglas, N.B., was second with good dishes of Peasgood's Nonesuch and Stirling Castle. The Pears brought three entries, and Mr. J. Day, gardener to the Earl of Galloway, Galloway House, Garliestown, N.B., who staged good specimens of Doyenné Boussoch, Pitmaston Duchess, Beurré Diel, Beurré Bachelier, Marie Louise, and Durondeau; and Mr. C. Webster followed with good dishes of Fondante de Bois, Pitmaston Duchess, and Marie Louise.

OPEN TO IRELAND ONLY.—The Emerald Isle only forwarded two entries, and there the judges awarded equal firsts (surely another injustice to Ireland). The competitors were Mr. J. Orr, Loughgall, co. Armagh, who had Peasgood's Nonesuch, Emperor Alexander, and Worcester Pearmain, good. The other competitor was Mr. J. S. Weston, gardener to Viscount Duncannon, Bessborough, co. Kilkenny, his best dishes being Lane's Prince Albert, The Queen, and Golden Spire.

OPEN TO THE CHANNEL ISLANDS ONLY.—These noted Islands only produced one exhibitor, who staged in both classes, and was awarded first prize. The best Apples were Blenheim Orange, Warner's King, Bramley's Seedling, Lane's Prince Albert, Ribston Pippin, and Cox's Orange Pippin; while the best Pears were Doyenné du Comice, Glou Morceau, and Josephine de Malines.

Single Dishes of Open-air Fruit.

Dessert Apples.

Adams's Pearmain.—These started at class 60, in which there were thirteen entrants; Mr. F. W. Thomas, Wamock, Polegate, was first.

Allen's Everlasting.—Represented by one dish from Mr. Woodward, and these were poor samples.

Allington Pippin.—Here eleven came forward, Mr. G. Woodward

Brownlee's Russet.—Four entries here, of which Mr. Ed. Coleman's samples were best, beating Mr. G. Woodward. All samples were good.

Claygate Pearmain brought forth six entries, Mr. G. Woodward here leading; and second, Mr. R. M. Whiting, with well coloured but rather small fruits.

Cockle's Pippin.—First here was Mr. W. Turkey, gardener to J. K. D. Wingfield Digby, Esq., M.P., with an even dish; and second Mr. R. M. Whiting.

[illegible]

A. Pope	J. Willard	S. T. Wright	F. Reader	W. Crump	Geo. Norman				
W. Farr	P. Kay	R. Fielder	Rev. W. Wilks	J. Assbée	J. R. T. Chalice	A. Ward			
E. Beckett	H. B. May	E. T. Cook	W. Marshall	J. Douglas	S. Mortimer	W. Bates	Ed. Basham	W. J. Poupard	H. Somers Rivers
					R. Fenn	J. Wright	O. Thomas	H. Balderson	Geo. Bunyard

GROUP OF JUDGES, REFEREES, AND FRIENDS AT C.P. FRUIT SHOW.

NOTE:—Owing to the irregularity of the group there may be some slight difficulty on the part of readers to locate the persons named. By taking the photograph as much as possible in lines, and noting that where asterisks (*) are used the names are wanting, exactitude may be obtained.

with good samples, and Mr. Challis second. A number of good dishes were unrecognised.

Blenheim Orange.—This fine Apple had eighteen dishes representing it. Mr. A. J. Carter, Newfield, Billingshurst, was first with even fruits; second, Mr. R. M. Whiting, Credenhill, Hereford.

Braddick's Nonpareil. — None of those here were good. Mr. G. Hagen, gardener to E. A. Lee, Esq., Fowley, Liphook, led with even samples; second, Mr. G. Lock.

Cox's Orange Pippin.—Here again was a record entry of thirty-three dishes. First went to Mr. W. H. Davies with a magnificent dish; equal seconds, Mr. G. Grigg and Mr. T. E. Pearce.

Duke of Devonshire.—Two entries came, the first prize going to Mr. W. E. Humphreys, gardener to A. H. Smee, Esq.; and second, Mr. J. Riek, both very even.

Egremont Russet.—Mr. G. Woodward beat Mr. R. M. Whiting, both with fine dishes.

Fearn's Pippin.—Eight entries. First Mr. W. T. Stowers, Whitehall, Sittingbourne, with excellent samples; and second Mr. S. Osborne, gardener to the Duke of Fife.

Gascoyne's Scarlet.—Mr. Stowers, with well coloured but small fruits, came first out of six; Mr. T. Clinch, Key Street, Sittingbourne, followed.

Golden Reinette.—Mr. Wm. Jones, gardener to J. B. Bringham, Esq., Carshalton, had the only entry.

Gravenstein.—There were twenty-two entries, and Mr. Davies led with large but dull fruits; second, Mr. G. Grigg.

King of Tomkin's County.—Four entries. First Mr. Woodward, and Mr. A. Smith, gardener to Madame Stuart, both dishes grand.

Lord Burghley.—This brought out three dishes; Mr. W. Camm first, second Mr. H. Forder.

Mannington's Pippin.—Four entrants only, of which Mr. J. Rick's were best, and Mr. C. Ross came second.

Margil.—This useful sample brought a dozen examples. Mr. Davies first, beating Mr. J. Rick.

Mother (American).—Eight entrants contested, and Mr. T. Slade, gardener to Lord Poltimore, won first; second, Mr. R. M. Whiting, with handsome samples.

Ribston Pippin.—A good Apple, and fairly well shown. Mr. J. W. Barks, Castle Hill, Bletchingly, out of nineteen dishes, led; second, Mr. Woodward. There was little to choose between these.

Rosemary Russet.—Mr. W. Camm was first with good samples, and second Mr. R. M. Whiting with well coloured, but smaller fruits.

Old Nonpareil.—Mr. T. Challis led, in this case beating Mr. H. Forder. The fruits were small.

Scarlet Nonpareil.—Six entered, and Mr. Woodward was champion; second, Mr. C. Ross.

Sturmer Pippin.—The fruits here were very green. Fourteen entered; Mr. W. T. Stowers beat Mr. J. W. Barks, though both were very equal.

Winter Quarrenden.—Mr. F. W. Thomas, Wannock, had the only dish.

Any other Variety.—Thirty dishes were shown, Mr. C. Ross coming first with The Houblon, a new variety resembling Cox's Orange Pippin; and second, Mr. R. Edwards, Beechy Lees, Sevenoaks, with Washington; Mr. W. H. Davies third, also with Washington.

Annie Elizabeth.—This brought but six entries, first, Mr. T. Turton, and second, Mr. Potter.

Peasgood's Nonesuch.—Mr. Woodward had the finest assortment; Mr. W. T. Stowers being next to him.

King of the Pippins.—Twenty dishes of neat fruit were staged. Mr. W. H. Divers took the honours to Belvoir Castle, and second, Mr. Grigg. All were excellent samples, and competition was close.

Cooking Apples.

Alfriston.—Four entrants, with Mr. G. Woodward leader, and Mr. C. Ross second. All good samples.

Beauty of Kent.—Mr. G. Woodward, out of four entrants, led, and Mr. Whiting followed second.

Belle de Pontoise.—Again there were four dishes, with Mr. G. Woodward first, and Mr. T. H. Slade second, massive products being exhibited.

Bismarek brought out ten dishes, Mr. Woodward, of course, coming first, followed by Mr. G. Lock.

Blenheim Orange.—Mr. Woodward, with handsome Apples, was the premier winner; second, Mr. H. A. Carter. Eleven dishes were shown, all of them very good.

Bramley's Seedling.—First again went to Mr. Woodward. Ten dishes were shown. Mr. W. T. Stowers second, and Mr. T. Challis third.

Cox's Pomona.—Here we found eight dishes, and Mr. W. T. Stowers, Mr.

Dunelov's Seedling (Wellington and Normanton Wonder).—Nine dishes were staged, the first dish from Mr. G. Grigg, and these were most superb dishes.

Emperor Alexander.—Only three dishes came to the lists, Mr. Woodward with perfect samples winning easily. Mr. W. T. Stowers annexed the succeeding prize.

Gascoyne's Scarlet Seedling.—Mr. W. T. Stowers won here; second, Mr. T. S. Melvor, gardener to F. H. D. C. Whitmore, Esq., Orsett Hall, Grays.

Golden Noble.—Mr. Woodward was again to the fore, but Mr. W. H. Davies came an exceedingly close second.

Golden Spire.—Three dishes only, first going to Mr. Woodward, and second Mr. J. G. Weston.

Hormead Pearmain.—Mr. R. M. Whiting beat Mr. J. Rick, both with grand samples.

Lane's Prince Albert.—Twelve handsome sample dishes were forward, Mr. Stowers foremost; and second, Mr. A. J. Carter, Newfield, Sussex.

Lord Derby.—Mr. Woodward beat Mr. W. T. Stowers from amongst four others.

Mère de Ménage.—Here the fruits were very dark in colour; Mr. Stowers beat Mr. Woodward.

Newton Wonder.—For Newton Wonder Mr. Divers beat Hamilton Hurnard, Esq.; and third, John Lee, Esq. These were from the northern counties' section. There were ten entries in the southern

section, however; Mr. G. Woodward leading, Mr. J. Hudson second, and Mr. A. Basile, Woburn Park, Weybridge, third.

Royal Jubilee.—A grand dish from Mr. C. Ross was the only exhibit of this.

Sandringham.—Mr. G. Woodward, with very fine samples, beat Mr. A. Smith.

Stirling Castle.—Three entrants here, with Mr. C. Ross first, and second Mr. R. M. Whiting.

Stone's (Loddington Seedling).—We of course expect Mr. Woodward to lead here; second prize fell to Mr. Whiting.

The Queen.—There were five dishes here, Mr. W. H. Davies leading with grandly coloured samples; Mr. Woodward second with much larger samples.

Tower of Glammis.—Three entries came forward, leaving Mr. Woodward first, and Mr. G. Hagon second.

Waltham Abbey Seedling.—Mr. Woodward beat Mr. T. Clinch, though only two dishes were exhibited.

Warner's King.—The same redoubtable first prizeman led here, beating Mr. T. W. Stowers, both showing huge sample.

Any other Variety.—Seventeen entries, Mr. Woodward winning with Belle de Pontoise, and Mr. Stowers with Gloria Mundi second, and Mr. R. M. Whiting with Suffield.

Dessert Pears.

Beurré Bose.—Six handsome dishfuls came forward; Mr. J. Webb, gardener to H. Padwick, Esq., Manor House, Horsham, being in the premier place, and Mr. W. H. Bannister second.

Beurré d'Anjou.—Three dishes only, of which the best came from Mr. Bannister, and received the first award; Mr. Ed. Colman followed second.

Beurré Diel.—Eleven superb lots were presented, and here Mr. T. Turton, Sherborne Castle, Dorset, was far and away the finest exhibitor; his samples were perfect. Mr. W. Camm formed a fair second.

Beurré Dumont.—First, Mr. G. Woodward; second, Mr. R. Edwards.

Beurré Hardy.—This, so far as quality went, was one of the best classes in the show. Mr. Woodward led with perfect types; and second, Mr. W. T. Stowers.

Beurré Superfin.—Mr. Stowers again came to the front here with a very fine dishful, all very even; Mr. A. Basile was a close second, but had smaller fruits.

Comte de Lamy.—A varied half dozen sets were placed on the table, the first and second awards going respectively to Mr. W. H. Bacon, and Mr. T. W. Herbert, Mitfield Court, Redhill.

Conference.—Mr. W. J. Barks, Castle Hill, Bletchingly, was first, and Mr. Woodward second, both with examples slightly below the average standard of show excellence. Six entered.

Doyenné du Comice.—From amidst thirteen entrants Mr. G. Woodward stood first with a fine and handsome set; Mr. T. H. Slade followed, a fair second, with less highly coloured Pears.

Easter Beurré.—The eight dishes shown contained handsome and even fruits; Mr. W. T. Stowers won, while the succeeding award fell to Mr. Woodward, a close second.

Durondeau.—Ten highly coloured and very excellent representations were forward, the premier award falling to Mr. T. Turton, and the second to Mr. Woodward, whose fruits were much smaller in size.

Emile d'Heyst.—Here there were five entrants, and Messrs. Turton and Woodward were placed in this order.

Fondante de Thirriott.—Mr. Woodward staged the only dish, and fine clear samples they were.

Glou Morceau.—Fifteen dishes of this very distinctive Pear appeared. Mr. W. Jones, Wallington Bridge, had the finest lot; and second place was secured by Mr. A. Basile.

Josephine de Malines.—The eleven sets of this good variety varied considerably. Mr. T. Challis led off with a grand even lot, beating Mr. Woodward, who took second.

Louise Bonne of Jersey.—Again there were fifteen lots, all of them good fruits too. Mr. W. Jones was first; Mr. Ed. Coleman, North Frith, following for second place.

Olivier des Serres.—Five good dishes were staged. Mr. W. E. Humphreys, from Hackbridge, beat Mr. Ed. Colman.

Marie Louise.—This fine old favourite had eleven supporters, and competition was exceedingly close. Mr. Woodward had the benefit of the doubt; and second, Mr. W. Camm, from Battle Abbey Gardens.

Nouvelle Fulvie.—Five entries. Mr. W. Thomas, Wannock, Sussex, being first; and Mr. T. Turton second. The samples were behind in quality.

Pitmaston Duchess.—This variety had the greatest number of entries—namely, twenty-four, and every one was good, though some were over-ripe. Mr. Woodward's six were in the pink of condition and secured first place for him; Mr. W. Lewis, East Sutton Park, near Maidstone, was a very close second. There were no other prizes, but Mr. Jones was highly commended.

Seckle.—Three fair dishes came; first Mr. C. Ross, and second Mr. T. Neale.

Thompson's.—Here eight dishes were presented. Mr. J. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, W., was first with absolutely perfect samples of medium size, but clear yellow, smooth and even; Mr. T. Turton was second with larger fruits, but these were not nearly so refined.

Triomphe de Vienne.—No entries appeared here.

Winter Nelis.—This useful Pear was shown in nine entries, all even fruits. Mr. T. Challis led first, and second Mr. W. Camm.

Any other variety.—Four prizes of 7s., 6s., 5s., and 4s. respectively, were here awarded. First was annexed by Mr. Ed. Coleman with Gansel's Bergamot; second, Mr. Stowers, with Duchesse d'Angoulême; third, Mr. A. Basile, with Marguerite Marrillat; and fourth, Mr. C. Sutton, gardener to Earl Stanhope, Chevening Park, Sevenoaks. Thirty good dishes were shown.

NURSERYMEN'S DIVISION.

In the class for fruit grown entirely out of doors, to occupy a table 48ft long and 6ft wide, there were but two competitors. The premier honour, carrying the Gold Medal, went, as usual, to Messrs. George Bunyard and Co., Maidstone, who arranged a very attractive display. The tables were covered with dishes and baskets of fruit, in addition trophies of richly coloured Apples relieved the monotony of the tables; while the few small Palms, Ferns, Asparagus Sprengeri, and Smilax used for decoration were most effective. The Apples most striking were Mrs. Phillimore, Hereford, Crimson Queen, Stone's, Emperor Alexander, Swedish Reinette, The Queen, Bietigheimer, Gloria Mundi, Oker, Gascoyne's Scarlet Seedling, Bismarck, Hoary Morning, Cox's Pomona, Mrs. Barron, Castle Major, Allington Pippin (grand), Mother, Stirling Castle, Cox's Orange Pippin, Worcester Pearmain, Fearn's Pippin, Cellini, Wealthy, and Wadhurst Pippin. The best Pears were Marguerite Marrillat, Grosse Calebasse, Beurré Clairgeau, Doyenné Boussoch, Durondeau, Triomphe de Vienne, Marie Louise d'Uccle, Uvedale's St. Germain, Forelle, Madame Andre Leroy, and Brockworth Park; while the remainder comprised Damsons, Medlars, Crabs, Nuts, Grapes, and Bullace, a really notable exhibit. Messrs. H. Cannell and Sons, Swanley, were awarded third prize. The exhibits were individually good, but there was too much bare space on the tables, which did not add to the effect. The baskets of Bismarck, Lord Derby, Emperor Alexander, New Hawthornden, Cellini, The Queen, Pott's Seedling, Peasgood's Nonesuch, Warner's King, and Stone's were capital specimens, as were also the examples of Marie Louise d'Uccle, Catillac, Beurré Hardy, Durondeau, Pitmaston Duchess, Princess, and Beurré Clairgeau. A few dishes of Plums and Damsons completed the display.

Class 15.

For 32ft run of 6ft tabling there were four capital entries. The premier position was taken by Mr. John Basham, Fair Oak Nurseries, Bassaleg, Newport, Mon., who certainly excelled himself, not only in the excellence of his produce, but in staging also. A huge trophy formed the centre, while the table was relieved with a few Palms. The Apples were alike striking for their size and good colour. Some grand examples of Ecklinville Seedling, King of Pippins, Sandringham, The Queen, Tibbet's Pearmain, Lord Derby, Mère de Ménage, Peasgood's Nonesuch, Lane's Prince Albert, Mabbot's Pearmain, Worcester Pearmain, Washington, Royal Jubilee, Gascoyne's Scarlet, and Tyler's Kernel were some of the best examples, though by no means all. The notable Pears were Beurré Hardy, Beurré Rance, Beurré Diel, King Edward, Doyenné Boussoch, Princess, and Doyenné du Comice, while mention must be made of Monarch and President Plums. The second position was allotted Messrs. J. Cheal and Sons, Crawley, who presented a varied exhibit tastefully arranged. Apples were clean and well grown, and included good typical dishes of Paroquet, Lowfield Seedling, Emperor Alexander, The Queen, Pott's Seedling, Cox's Orange Pippin, Sandringham, Cox's Pomona, Bismarck, Carlisle Castle, Peasgood's Nonesuch, and Royal Jubilee. Good examples of Pears, Medlars, Plums, Tomatoes, and Crabs were also shown. The third place was awarded Messrs. J. Peed and Son, West Norwood, who had a capital display, especially when it is considered that the fruit is grown within seven miles of Charing Cross. The Apples were very good, such as Wealthy, Peasgood's Nonesuch, Prince Arthur, Wellington, Fillbasket, Lord Derby, Cox's Orange Pippin, and Warner's King. The most conspicuous Pears were Brockworth Park, Marie Louise, Emile d'Heyst, Beurré Diel, Uvedale's St. Germain, and New Duchess.

Class 16.

The class to occupy a space of 16ft run of 6ft tabling brought out a grand competition, no less than seven competitors facing the judges. However, Messrs. George Cooling and Sons, Bath, came out at the top of the tree with a splendid display of Apples and Pears. The former were large and well developed, while little fault could be found with the staging, which was well executed. A few of the best Apples were Hambling's Seedling, Lord Suffield, Blenheim Orange, Ribston Pippin, The Queen, Golden Spire, Worcestershire Pearmain, New Hawthornden, Gascoyne's Scarlet, and Lady Henniker. Pears were excellent in such varieties as Beurré Diel, Beurré Clairgeau, Doyenné du Comice, and Duchesse d'Angoulême. Messrs. Edwin Hillier and Sons, Winchester, made a capital second with good examples of Apples, some of the best being Peasgood's Nonesuch, Cox's Orange, Egremont Russet, King of Pippins, Washington, American Mother,

and Aromatic Russet, Lady Palmerston Peaches, Wyedale Plums, and Pears King Edward, Beurré Clairgeau, Doyenné du Comice, and Marie Benoist; a very well arranged exhibit. In this class Mr. Will Taylor, Hampton, Middlesex, was third with a capital exhibit, in which the Apples shone considerably, for here were really fine dishes of Lord Derby, Emperor Alexander, Peasgood's Nonesuch, Blenheim Orange, and Bismarck.

Nurserymen's Orchard House Trees.

The class for orchard house fruit and trees, to occupy a space of 32ft by 6ft of tabling. Here we had a meeting of the giants; but the premier honour was awarded Messrs. G. Bunyard and Co. for a choice display. The pot trees were in good condition, carrying plenty of good fruits, in which were noted Peasgood's Nonesuch, Gascoyne's Scarlet, and Mabbot's Pearmain in Apples; while Pears were a more comprehensive display, good examples of Conference, Marie Louise, Beurré Fouqueray, Josephine de Malines, Durondeau, Beurré Superfin, and Uvedale's St. Germain. A few pots of Figs and Plums were also in evidence. At the sides and groundwork of the tables were grand baskets of Apples and Pears; the best of the former were Bismarck, Mother (grand), Sandringham, King of Tomkin's County, Gloria Mundi, Emperor Alexander, Washington, Reinette du Canada, Peasgood's Nonesuch, and Cox's Pomona. The Pears were large, well developed and clean; the most conspicuous were Catillac, Beurré Superfin, Marguerite Marrillat, Beurré Baltet Père, Pitmaston Duchess, Uvedale's St. Germain, and Marie Benoist. Needless to add, the whole was splendidly displayed.

Messrs. T. Rivers and Son, Sawbridgeworth, must have been a desperately close second, in fact, perhaps a little closer than that, for it was a truly grand exhibit, and worthy of the exhibitors. The pot trees consisted of Apples Gascoyne's Scarlet, Bijou, Emperor Alexander, and Melon; while well-cropped examples of Pears were Magnate, Conference, Durondeau, Beurré Fouqueray, and Pitmaston Duchess; Plums, Coe's Golden Drop and Late Orange, and Salwey Peach. The group was edged with baskets of Apples, Pears, Plums, and Peaches. The best Apples were Emperor Alexander, The Queen, Washington, King of Tomkin's County, Peasgood's Nonesuch, and Cox's Orange Pippin. Splendid examples of the following Pears were to be seen:—Doyenné du Comice, Parrot, St. Luke, Pitmaston Duchess, and Princess; while Plums and Peaches completed the display.

MARKET GROWERS ONLY.

Grapes.

Class 18 was the first in this division, and asked for a single layer of Hamburgh Grapes, not less than 12lb in a baby basket. Two entered, and the first award was secured by Messrs. W. and E. Wells (gardener, Mr. G. Thompson), Halton Hurst, Hounslow; the second set was almost on a par with the first, and came from Messrs. W. Poupart and Son, Marsh Farm, Twickenham. The succeeding class was for a similar basket of a white variety, and here only Mr. W. J. Batho, Nether Street Nursery, Finchley, obtained the award. The Grapes were large, but green. The same gentleman led in class 20, also with white Grapes, but packed in a package other than a baby basket.

Apples.

Then came the collections of Apples for cooking. Four varieties, weighing about 42lb net of each, in baskets or boxes were set up, the first prize falling to Messrs. Poupart and Son, with excellent samples of Peasgood's Nonesuch, Bismarck, Lane's Prince Albert, and Wellington. And we were pleased to see a Monmouthshire man, to wit, Mr. E. Basham, Bassaleg, Newport, come second out of four entrants. He staged Ecklinville Seedling, Lord Derby, Lane's Prince Albert, and Newton Wonder. Mr. Basham employed "flats," the others all used "sieves." The flats struck us as being the most accommodative. For a similar entry of dessert Apples in four varieties, the premier award was annexed by Mr. George Chambers, Smarlswell Farm, Mereworth, Kent, with very saleable fruit. His baskets of Court Pendu Plat, Ribston Pippin, Cox's Orange and "King Pippin" were very fine, though more wood shavings might have been used amongst them. Messrs. Poupart and Son were second in this class. Class 23 was for two baskets (about 20lb) of cooking Apples, in which there were five entries, from amongst whom Mr. G. Chambers emerged as first, with Lord Derby and Warner's King; and Mr. Basham second, with Gascoyne's Scarlet and The Queen. Mr. H. Mason, Rectory Farm, Hampstead Hill, Middlesex, led for a like exhibit of dessert samples, staging Cox's Orange and Ribston Pippins. Mr. Basham followed as second with carefully packed Apples. His Allington Pippins were such as anyone might well be proud of. The Ribstons in the first set were, however, exceptionally superior. Five entered. The class for "any variety," staged in an improved form of package, absorbed some considerable time and great care from the judges. Six competitors came forward, four with baskets and two with wooden boxes. Eventually Mr. E. Basham's "flat" basket obtained cognisance; and Mr. A. J. Adcock, The Vineries, Felixstowe Road, Ipswich, fell heir to the second prize. The latter competitor had not laboured quite so much pains on the packing.

For a package showing improved form of packing the laurels went to the Messrs. Poupart and Son, the fruits being separately bound in tissue paper, and so evenly graded that when they were fitted-in in rows there could be no shifting. Mr. Basham followed for second.

Pears.

Mr. George Chambers had the two finest packages of Pears in two varieties, namely Pitmaston Duchess and Doyenné du Comice; Mr. A. Wyatt, Halton, Middlesex, only obtained second, but certainly his exhibit must have tried the keenest discriminating powers of the adjudicators. He staged, in flat boxes, Louise Bonne de Jersey and Pitmaston Duchess. Six entered this class. Messrs. Poupart beat Mr. A. Wyatt in a class for over two dozen Pears, packed and ready for market. There was little to draw between the lots, and personally a set that did not obtain any recognition pleased us best in the manner of packing.

Two exhibitors entered for the collection of twelve varieties of Apples and six of Pears, distinct, eighteen fruits of each, to be laid flat on the table without dishes or baskets. Only Vine or similar leaves allowed for decoration, and the space occupied must not exceed 16ft by 3ft. The first award of £4 10s. was given to Messrs. Poupart and Son, who staged remarkably clean samples, all very even and saleable. The second prize collection were large, and had suffered severely from the storms of the few preceding days. The competitors here omitted to place their cards upon the table, but from boxes beneath we obtained the name Messrs. W. J. Lobjoit and Son. Owing to the lateness of the show this year there were no entries of Plums. Of Tomatoes four baskets were staged, the first place being held by Mr. C. Moon, Chessington Court Nurseries, Surbiton, with Comet. Messrs. W. Poupart and Son had smaller fruits, and followed second.

MISCELLANEOUS EXHIBITS.

The miscellaneous groups of flowers and plants add greatly to the interest of this show. Messrs. Cannell and Sons staged their wonderful unexcelled Cannas together with a collection of hardy fruit, which has been noticed in our report of the competitive section. Messrs. Peed and Son, South Norwood, did well to bring so handsome an assortment of perennial herbaceous Asters (Michaelmas Daisies) as that shown by them near the Handel organ.

Then there were groups of hardy cut flowers from Messrs. Barr, B. S. Williams and Son, Paul and Son (Roses), M. Pritchard, and Cheal and Sons (Dahlias). Both Messrs. T. S. Ware, Ltd., and Peed and Son, showed flowers of tuberous Begonias cut from the open air. To many provincial growers, who have not seen the efforts of these specialists in Begonia culture, the samples which they are able to exhibit at this late period, and from the open air, too, would quite come as an astonishment. We should have liked to visit Messrs. Peed's grounds where these Begonias are grown so well, but time has been fleeting, and our duties have been constant. We take this opportunity, however, of expressing our appreciation of the excellence of their double and single tuberous Begonias, as seen many times at shows in London this season.

Messrs. Barr and Sons, we might point out, have a wonderfully fine lot of Kniphofias amongst other things, and of these we took especial notice of Kniphofia Leichtlini, K. L. distacha, K. L. aurantiaca, L. caulescens, L. Max Leichtlini, L. Macowani (one of the choicest), L. corallina, and L. c. superba. These Torch Lilies, or Red Hot Pokers as they are usually called, are welcome in the autumn borders of all gardens.

Amongst those who exhibited fruit collections, the more notable were Messrs. Rivers and Son, and Messrs. James Veitch and Sons, Ltd. Messrs. Horne and Son, Cliffe, Rochester, also staged a grand dish of their new Charles Ross Apple, which the "Journal" was able to point out last week. Messrs. Veitch's exhibit was a most imposing one, the sample fruits being full-sized, according to the variety, clean, well-coloured, and even. The most striking dishes of Apples were Stone's Seedling, Tyler's Kernel, Lane's Prince Albert, Blenheim Orange, Cox's Pomona, New Hawthornden, Baumann's Red Reinette, King of the Pippins, Cellini, and Lord Suffield. The James Grieve Apple, Bijou, Wealthy, and Allington Pippin were also very handsome. The Pears, Marie Louise, Dr. Hogg, Beurré Diel, Beurré Superfin, St. Luke, and many more, were exceptionally fine.

Messrs. Thomas Rivers and Son, Sawbridgeworth, Herts, staged, as usual, magnificent specimen Apples from orchard-house trees. Their specimens of Hollandbury were perfect; others in equal prominence were Yorkshire Beauty, Gloria Mundi, Peasgood's Nonesuch, Cox's Orange Pippin, Gascoyne's Scarlet, Lady Henniker, Emperor Alexander, Washington, The Queen, and Blenheim Orange. Peaches Lady Palmerston and Salwey were shown by fine examples; also Late Orange Plum. Grapes, and trained pyramidal trees in pots, with wood stout and bristling with fruit buds. The trees exhibited were also laden with fruits.

Messrs. Spooner and Sons, Hounslow, staged a full collection of the most useful and popular varieties of Apples, all of them clean and good. Messrs. W. Balchin and Sons, Hassocks,

Brighton, must further be mentioned as exhibitors in this direction. Their fine array included many little known but meritorious varieties of the Apple.

Messrs. Wells and Co., Earlswood, Redhill, Surrey, had a remarkably fine group of cut Chrysanthemum blooms. A number of promising seedlings were included, as well as last year's favourites. Madame Von Andre was A1; Paul Valade and Sir G. White, Miss A. Byron and O. J. Quintus, the latter a grand cut-and-come-again sort.

The Swanley Horticultural College sent preserved fruits in bottles, besides a large collection of beautiful clean Pears and Apples. Messrs. William Cubush and Son had a group of retarded Spiræa japonica, Lily of the Valley, also Carnations, Ericas, Ghent Azaleas, and other choice out-of-season plants.

Interest in Fruit Culture.

So much has been written about commercial fruit culture of late years that it appears as though all one has to do is to plant and grow rich. But there is need for careful consideration when one comes to know the ins and outs of everything. That fruit culture is on the increase, at any rate in this country, is apparent by the number of young orchards and plantations to be seen everywhere. You may see standard fruit trees growing amongst Hops, as though the grower had an idea of doing away with the latter, but is now unable to make up his mind. It will not do for long, of course, one must give way; but the lesson it teaches is that the best way to obtain a permanent orchard is to plant the trees on land that is under cultivation. They become established far quicker than if planted on grass land, and in a few years the ground can be seeded down. Half-standards of Apples and Plums in mixed plantations are very popular, as they last a long time, and will allow for low-bush fruit as well. At the same time, there are many who realise the quick returns from bush Apples worked on the Paradise.

In certain counties, such as Hereford, Somerset, and Devonshire, where Apples are largely grown, cider is a universal beverage; but the same cannot be said of the Garden of England. There are Apples in abundance, and in the Weald of Kent and a few other places cider is made and consumed. But for the most part the average Kentish man prefers John Barleycorn; perhaps because he grows the Hops that help to make it, and he has yet to be educated in the consumption of the beverage made from the juice of the Apple. Kentish Apples appear to be grown for market, and the sooner they can be got there after they leave the trees the better the grower is pleased. This is, perhaps, why there is not much attention paid to the storage of long-keeping varieties. I know one grower who had a quantity of Apples of a local variety that would not sell. By the way of an experiment he turned them into cider, and produced an excellent sample. The otherwise useless trees have not yet been utilised for fire wood, so I conclude that the experiment was profitable.

The Question of "Labour."

The labour question has been one of serious proportions during the last few seasons. Growers could hardly get men for love or money, and women have been none too plentiful. In supplying the million with its fruit, female labour plays an important part. As soon as the first Gooseberries are large enough for picking, and the earliest Strawberries begin to redden, housewives and daughters turn out, and the work continues as long as the season lasts. It would shake the nerves of many ladies to mount a ladder and scale to the heights of a tall Cherry tree with a basket slung on their backs, but the Cherry pickers think nothing of it. Stout, buxom females trip up the ladders with the grace of acrobats, and, perched amongst the branches, they pick away with just as much confidence as if they were on terra firma. Taken altogether, the fruit-growing industry is one that presents many interesting phases. It might be better done, certainly it could be worse, and taking the bad with the good the market fruit-grower is probably as well off as most people who live on the land.—H.

Forestry in America.

While our daily papers, early in May, were burdened, says "Meehans' Monthly," with editorials showing how cities, in many parts of Europe, raised forests and paid the whole municipal expenses out of timber sales, a single forest fire in New Jersey was raging until a tract of 60,000 acres of valuable timber was burned over. The fire started among the dead wood and rubbish gathered in the underbrush, which our forestry leaders tell us is so essential in American woods in order to retain the water and fill the springs! European forestry seems to understand how to get plenty of spring water without forest underbrush, and the risk of forest fires.

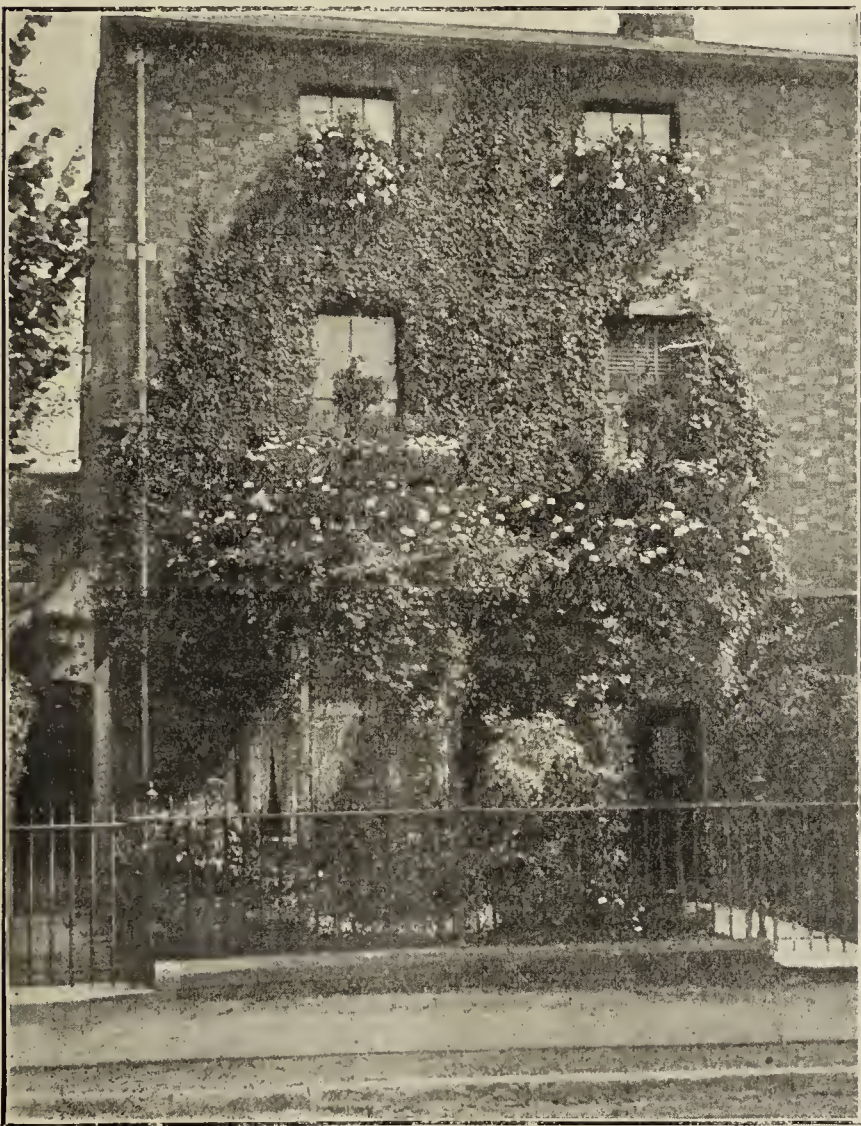
Gadding and Gathering.

"Here awa', There awa'."

Messrs. T. S. Ware, Ltd., whose offices are now at Hale Farm Nurseries, Feltham, Middlesex, have a great fame for the superior excellence of their tuberous Begonias. Whether double or single, the strain is second to none, and their exhibit of the double-flowered varieties, that yearly fills a bench at the great Temple Show in May, is one of the chiefest floral treats of the season. It is, perhaps, not generally known that the new varieties that annually receive recognition from the Floral Committee of the Royal Horticultural Society are selected from seedlings grown during the summer in the open air. Two weeks ago I took train to Bexley Heath, which is not very far from Greenwich, and found over two acres of ground smothered in colours of crimson, scarlet, golden, bronze, white, and yellow—the shades of huge beds of Begonias all in bloom.

Ware's Begonias.

Mr. Pope is the successful raiser and grower in the employ of Messrs. Ware, Ltd. He told me—it was a Saturday afternoon



A TASTEFUL WINDOW GARDEN.

—that he would be busy from six till twelve o'clock the next morning in securing his "crosses" for next season's seedling novelties. The Begonias he cross-fertilises are, of course, growing in pots under glass, in a dry temperature of 70 degrees, wherein the seed-pods are ripened, and by January of the new year the seeds are sown. The usual pricking-out operations are enacted, and in due course, say in the third week of May, the plantlets are planted out, half a foot apart either way, in beds in a long, beautifully sheltered, sunny orchard.

The summer treatment includes the usual weeding, hoeing, watering, and general watchfulness to ensure sturdy and floriferous plants. Then, in September, or somewhat earlier, when the characteristics or idiosyncrasies of the plants have been exhibited, all that show an advance in one or more qualities, be it habit, prolificacy in flowering, or form and colour of the blooms—all these are lifted and immediately potted. When grown indoors, the treatment can be regulated according to the aims of the cultivator. By the end of September these plants have become exhausted through the efforts of the cultivator to stop the supply of nourishment to the tubers. This operation is technically described as "drying-off." The effect of this is to cause the double flowers gradually to become less and less perfectly "double," until the male flowers are in a fit state to produce stamens with potent pollen. The hybridist, or cross-fertiliser rather, seeing that the operation is merely that of cross-

ing varieties, chooses the male and female plants of different sorts, but generally with flowers whose colours approximate, and these he "crosses." The seed-pods eventually mature, and the seeds provide him, as in Mr. Pope's case, with the seedlings he yearly offers.

Years ago, when the tuberous Begonia was first operated with, the percentage of double varieties that the grower could expect, or used to expect, was very low, perhaps twenty or thirty per cent. By very great care and skill, combined with an infinitude of patience, double tuberous Begonias have become the subjects possessed of the exquisite beauty of form and richness of colour which we now, in them, enjoy. But it is ever becoming a more arduous and exacting task to secure even the slightest advance. The pollen-bearing flowers are far harder to insure, owing to the complete "doubling" that has taken place, and the hereditary tendencies that are gradually settling into the constitution of the tuberous Begonia. "Doubling," as we nearly all know, is the natural (or unnatural) transformation of a stamen into a petal. A perfectly double flower has no stamens, that is, male organs; but the cultivator knows that in the case of the Begonia, which in a state of Nature has abundant stamens, he can always cause his perfectly double flowers to revert, and so become less perfect—perfect, that is, according to his ideals. By starving the plants they produce flowers with fewer petals; some of the petals (or what *would* be petals) again assume the form and function of stamens, as in former times, and the cross-fertiliser has secured what he desired, namely, pollen.

After having selected the *crème de la crème* of the year's seedlings from the open ground, Mr. Pope works away till lifting-time. The beds are all in distinct colours, in beds of scarlet, yellow, white, or crimson, as the case may be. They are all true, having come from distinct sets of seed-pods, known and kept in careful record by the manipulator. I cannot dwell on the beauty, the grand richness of a two-acre orchard, long and narrow in form, covered entirely with cross-beds of these most exquisite flowers. The sight, with the Apple-trees acting as a break and slight screen above and in the distance, seemed to me finer than anything of a similar nature that I had ever seen before. Truly, if I were a millionaire (which, Providence forbid!) I would have such an orchard!

The colour of each variety is carefully noted before the thousands that compose a bed are lifted. These are then offered through the firm's catalogue under certain sections. In the catalogue one can find seven sections; 1, for mixed bedders; 2, for varieties selected in colours for pot-culture or for beds; section 6, for exhibition doubles, selected to colour; and there are other sections providing varieties purely for conservatory, decorative uses, and for single Begonias. The gardener may rest assured of an ample selection in these seven sections. There are, of course, the gems that are thought meritorious enough to receive distinctive names and are catalogued in lists. The supply is yearly drawn from the beds of seedlings already mentioned. Of late years Messrs. Ware have devoted their closest attention toward securing a well-defined Picotee-edged race of tuberous Begonias, and with very considerable success. The "bearded" varieties receive their due meed of consideration, but the great end in view is to obtain erect growing doubles and singles of bushy, sturdy habit, and abundance of the most brilliantly coloured flowers. The soft and tender flesh-tints, pure whites, and rare combinations of crimson, bronze, buff, and yellow furnish another vein for evolution to be broadened and improved.—WANDERING WILLIE.

A Tasteful Window Garden.

Mr. Gardiner writes to us from Birmingham saying that "the enclosed photograph of a window garden was handed to me by Mr. Goodacre, of Elvaston Castle Gardens, whom I met at Derby recently, and he asked if I could manage to assist him in getting one of the horticultural papers to insert a few remarks anent the judging of window gardens at Stratford-on-Avon, where he was requested by Miss Marie Corelli, the distinguished novelist, to adjudicate upon them. This lady had given the prizes, being anxious to encourage floral window decoration there. The photograph was taken and sent to Mr. Goodacre by Mr. Randall, the first prizewinner. The following is portion of letter sent by Miss Marie Corelli to Mr. G. Randall, Chudleigh House, Stratford-on-Avon: 'I wish you would, by word as well as example, encourage many others in Stratford to compete next year. The arrangement of flowers inspires beautiful thoughts, and one cannot have too many of them in Shakespeare's town.'"

[The illustration shows the luxuriance in the Ivy-leaved Pelargoniums, the Ampelopsis, Clematis, and other trailing and climbing plants; proof indeed of the watchfulness and skill that has been bestowed. Perhaps Mr. Gardiner or Mr. Randall can name a few more of the flowers that are grown in this front garden.]



Algerian Grapes.

The British Consul in Algiers, in his annual report, says that the question of supplying fresh Algerian Grapes to the London market is being studied, and no doubt an effort will be made to create a market for the Grapes, which could be delivered for sale easily by the end of July, whereas the earliest Spanish Grapes are ready only at the end of August. "What finer Grape," says the Consul, "can one eat than the 'Chasseles' of Fontainebleau grown in Algeria?" The Pande-Musqués are also excellent. These, however, ripen later, but as the skin is thicker they will stand keeping longer, and could, no doubt, be preserved in cork dust for the winter months.

The Witch Hazel in Therapeutics.

In medical botany, Witch Hazel has a wide renown. Strange to say, for all the extended use of extracts and preparations in general, there are eminent medical men who regard it as of no real efficacy. Its use in medicine was introduced through its extensive employment by the Indians. They used the bark in decoction for tumours, inflammatory swellings, and hæmorrhages. This would indicate the presence of considerable tannin in the bark, as this is the main acting principle in remedies for these troubles. The Indians of the South ate the seeds, and made pretty ornaments from them. In the same natural order, there is apparently nothing of medicinal value unless it be the Liquidambar, or Sweet Gum, a species of which is so much admired in ornamental gardening. This is said to exude a balsamic resin.

Amelanchier canadensis.

At two seasons of the year this North American tree forms one of the most effective features of gardens where it is grown. In spring, when laden with its lovely racemes of white flowers, which smother the tree in such a manner as not to leave a branch showing, and again in autumn, when the leaves have changed to a brilliant red, or, in some instances, orange-scarlet, it is a lovely object, and it is difficult to decide at which time it is most attractive. In size and shape it varies considerably, some forms making bushy-headed trees after the manner of a large, weak-branched Apple tree, and others again making dwarf bushes which throw up numerous suckers, and in time make a dense mass. In either way it is very effective, and is well worthy of note as a subject to be planted in the coming winter by possessors of gardens where it is not already found. As regards cultivation, it gives no more trouble than an ordinary Crab Apple, an occasional thinning after once well established being all it requires. In addition to being a good outdoor plant, it makes an excellent subject for forcing for conservatory decoration in early spring.—W. D., Kew.

Crocus speciosus.

There must exist a lack of knowledge of this beautiful species, else one would surely see it more frequently in gardens. I shall never forget a huge patch of it I once saw at the old Chilwell Nurseries, in the lifetime of Mr. J. R. Pearson. It was when the clump was a mass of bright green foliage, the latter coming in spring and the former in autumn. Mr. Pearson gave me a few corms of it, and I have never been without it since. It was planted under a west wall, and there it remains, but disturbed occasionally for the purpose of presenting a few of the corms to someone who had admired it. The lovely pale blue purple blossoms well repay inspection; the exquisite pencillings on the interior of the petals should be noted. A little top-dressing of some fertiliser is occasionally given to the clump, and in dry weather occasional waterings, with alternate doses of weak manure water. It is on the whole a vigorous growing species. It appears to do well in any good loam, and wants to be undisturbed. I have seen it exhibited at the Drill Hall, but in imperfect character, as many of these things too often are. It is readily attainable, it is not expensive, and it might with advantage take the place of some meaner things.—R. D.

Home-grown Lilliums.

Mr. McOnegal, herbaceous foreman to Messrs. Mawson Bros., The Nurseries, Windermere, sends a boxful of splendid Lillium bulbs, large, fleshy, and firm, with the following notes:—"I have great pleasure in forwarding you sample bulbs of Lillium lancifolium roseum, that have been grown in our Windermere nursery. They have been in the ground for two seasons, in new soil of a stiff nature but very open, being well drained, the land being very stony. We also have L. Browni, L. l. Melpomene, and L. l. Krætzleri, etc., in like proportion, in fact the majority of Lilliums do exceedingly well with us." This is most pleasing news. In the south of England growers are successful in raising mighty fine samples of Lillium auratum. We are gratified to know of the success attending the efforts of our northern friends.

Iris tectorum.

This beautiful Iris species is now blooming in American collections. It was first described by the Russian botanist, Maximowicz, in 1871, who received the specimens from Japan. The leaves are strong and vigorous, much in the line of the well-known Japanese species, I. K. lævigata, or, as it is sometimes called, I. Kämpferi; yet it is quite distinct. The flower does not extend beyond the leaves, but is large and showy, the three outer floral leaves or sepals being 3in long and about 1½in broad. They are of a violet colour, prettily marbled with purple, and have a very prominent white, purple-mottled fringed beard in the centre. The three sepals, or second series of corolla leaves, says a writer in "Meehans' Monthly," are nearly as large as the sepals, and the three flattened stigmas forming the inner series are purple with white margins and prettily fringed at the apex, making a very showy flower. It has proven itself very hardy, and suitable for dryish locations.

Apple King Harry.

The following letter was received from a Fifeshire correspondent more than a month ago. She says:—"I here send you an Apple, which I obtained at Bath. I got the Apples at the principal fruiterer's, and he informed me that as far as he knew only one man in the district had them. I thought so highly of the Apple as an early eating one that I made inquiries, and found that the grower did not know anything about them, or the name. I am with difficulty getting some grafts, and will be much obliged if you will name the Apple for me." The variety was the King Harry Apple, named by us in the answers to correspondents column a week or two ago. In the "Fruit Manual" Dr. Hogg described it thus: "Fruit small, 2½in wide, and 2in high; roundish oval, even and regular in outline. Skin lemon-yellow all over, and thickly strewn with large russet dots. Flesh yellow, tender, juicy, sweet, and of fine flavour. A dessert Apple of high quality, in use from October till the end of November."

Figs under Glass.

Figs are receiving more attention now than for some years past, which is not to be wondered at, as ripe Figs are very wholesome, and early fruit very much prized for dessert. The varieties Early Violet and St. John's are reliable first croppers, and to succeed them, Brown Turkey has no equal for general purposes. Trees intended for affording fruit at the close of April or early in May will now need dressing with an insecticide, all those advertised being efficacious when properly applied, if the instructions are implicitly followed. Very little pruning will be necessary, the trees having been regularly stopped during the growing season, but if the growths are too crowded and irregular, they may be thinned to render the trees symmetrical. The house in which the trees are forced should have the wood-work and walls washed with hot water, afterwards lime-washing with hot lime and sulphur, a handful of the latter to each pailful of lime-wash. A mild bottom heat is almost a necessity to a successful swelling and perfecting of the earliest crop, the pots being raised upon loose brickwork, pedestal fashion, in the position they are to occupy in the bed, and so that the rims of the pots will be slightly above the level of the pit edges. The depth of the pit should be about 3ft, and filled with Oak or Beech leaves, pressed firmly. Care should be taken to avoid over-heating, a temperature of 60 to 65 degrees about the pots being sufficient to commence with.—A.

The Late Mr. Martin Hope Sutton.

Owing to the pressure caused by the publication of our special fruit number last week, we were unable to reproduce with our notice the portrait of this widely respected head of the house which has shed so much celebrity upon Reading and its neighbourhood, and done so much for home agriculture. This omission we now rectify, adding thereto some further particulars.

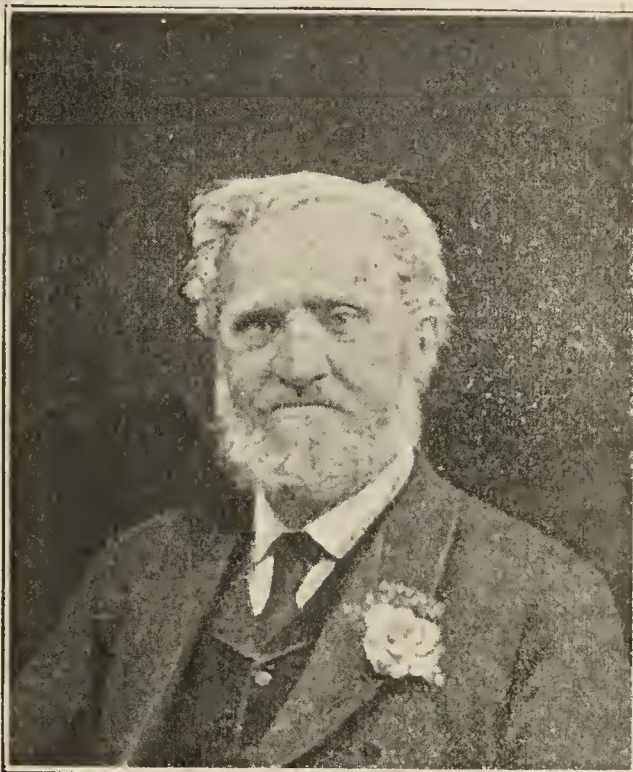
The characteristic which distinguished Mr. Martin Hope Sutton from the modern business man was the great interest he took in all good works, whether they bore a religious or a merely secular aspect. For more than half a century he freely gave valuable time, sagacious advice, and generous aid to the British and Foreign Bible Society, the Church Missionary Society, the Church Pastoral Aid Society, the Religious Tract Society, the London City Mission, the Young Men's Christian Association, and kindred institutions. He furnished the City Mission Home at Ventnor entirely at his own expense. In 1845 the London Young Men's Christian Association was inaugurated, and in the following year Mr. Sutton opened a Church of England Young Men's Christian Association in Reading. The first meeting was held at his own house, and he was continually elected president year after year. In his early years Mr. Sutton devoted himself to Sunday school work, and some of the boys who were regularly taught by him became afterwards employes in his business, and subsequently advanced to the position of heads of departments. In ragged school work Mr. Sutton was also an enthusiast, whilst he actively supported the temperance movement, religious services in theatres, and open air missions.

After a lifetime of such consistent well-doing for the community in which he lived, it was only to be expected that the obsequies of Mr. Sutton on Thursday, October 3, should be attended by special public manifestations at Reading. As the mourning train wended its way to the cemetery flags flew at half mast, blinds were lowered in respect, and long lines of spectators flanked the course of the funeral. In addition to forty-five carriages, bearing some 150 mourners, there were present at the graveside the following:—The Mayor and Town Clerk (representing the Reading Corporation), Mr. G. W. Palmer, M.P. for the Borough, and deputations headed by the following: Captain Cobham (the Church Association), Mr. Putterill and Mr. Mills (Y.M.C.A., Exeter Hall), Rev. T. C. Udall (London City Mission), Mr. John Wood (Evangelisation Society), Mr. Badenoch (the Mildmay Institution), Rev. W. Clayton (C.M.S.), Rev. G. Seaman (Primitive Methodist, Reading Circuit), Mr. Hurditch (London Evangelistic Mission), Rev. Dallas Harington (Bible Society), Colonel Bazett (Reading Town Mission), Mr. Maslen (Church of England Young Men's Christian Asso.), Mr. F. W. Albury (Reading Y.M.C.A.), Colonel Weldon (Colportage Association), Mr. T. Neve (Gardeners' Association), Mr. Robert Hewett (Trustees of St. Mary's Episcopal Chapel), Mr. E. C. Austen Leigh (Spottiswoode and Co.); also Lord Saye and Sele, General McGrigor, Colonel and Mrs. Weldon, Colonel Blandy, Major Thoyts, Major Papillon, Major Phillips, the Rev. M. T. Friend, the Rev. J. Consterdine, Mrs. S. H. Soole, the Rev. L. Forfeitt, Mr. C. B. Stevens, Mr. W. Pole Routh, Captain the Hon. R. Moreton, Colonel Graves, Dr. Marriott, Mr. Oliver Maurice, Dr. H. Phillips-Conn, Dr. and Mrs. Guilding, Dr. W. J. Maurice, Colonel Williams, the Rev. J. L. Hughes, the Rev. G. Collett (Basildon), Brigade-Surgeon Robinson, Mons. J. Rey, Messrs. C. G. Field, A. Beale, James Simonds, and many others.

Mr. Sutton had five sons and four daughters. Three of the sons—Mr. Martin J. Sutton, Mr. Arthur W. Sutton, and Mr. Leonard G. Sutton—together with Mr. Martin F. H. Sutton, the elder son of the first-named, now constitute the firm of Sutton and Sons.

Terrace Gardens, Richmond.

Those who delight in pretty gardens, and who dwell within easy reach of the Terrace Gardens at Richmond, would enjoy a walk therein at the present time. The little fountain seen from the Terrace walk is surrounded with gloriously bright early-flowering Chrysanthemums and dwarf Asters. What with the goldfish, the sparkling waters, and the many hued flowers, this miniature fountain garden is one of the brightest outdoor features of Richmond's beautiful terrace and public grounds.



THE LATE MR. MARTIN HOPE SUTTON.

Societies.

Royal Horticultural, Drill Hall, Oct. 15th.

The meeting, on Tuesday last, was varied and very full. Hardy plants were mostly in evidence, and a splendid central Gold Medal collection of *Nepenthes* from Messrs. Veitch. The collection of Gourds and Pumpkins from Messrs. Cannell was novel and exceedingly interesting. Essays were sent from three gardeners in Scotland on fruit culture—(1) from Mr. D. McBean, Rosebank, Caithness; (2), from Mr. W. Wright, Taymouth Castle Gardens, Aberfeldy, Perth, dealing with central Scotland; and (3), from Mr. James Day, Galloway House. Parts of these papers were read by Mr. George Bunyard, who occupied the chair.

Floral Committee.

Messrs. J. Veitch and Sons, The Royal Exotic Nursery, Chelsea, staged a large collection of *Nepenthes*, for which they have a just fame. Their specimens of *N. Hookeriana*, *N. Burkei*, *N. sanguinea*, *N. Dicksoniana*, *Mastersiana*, *Wrigleyana*, *Rafflesiana*, *Chelsoni* excellens, were all magnificent, and heavily laden with pitchers. A first-class certificate was given to a new species named *N. Rafflesiana*, from the Philippines. (Gold Medal.)

Messrs. Wells and Co., Ltd., Earlswood Nurseries, Redhill, staged a group of Chrysanthemums, some in pots and some as cut blooms.

Roses were set up by Mr. George Prince; hardy flowers, mostly Asters, by Messrs. Barr, H. J. Jones, James Veitch and Sons, Ltd., T. S. Ware, Ltd., and E. Beckett. Mr. H. J. Jones had also a group of Chrysanthemums. Messrs. Cutbush & Son, from Highgate, staged a splendid collection of *Pernettyas*, *Ericas*, and *Bouvardias*, and a few Carnations. A collection of beautiful shrub-sprays came from Messrs. Cheal, together with single and Cactus Dahlias. Mr. John Russell also staged a group of *Euonymus* and *Skimmias*. Messrs. Veitch also sent bunches of hybrid *Streptocarpus*.

Fruit.

Fruit in baskets, consisting of Tomatoes and Grapes, were brought forward by Mr. J. B. Le Page, a Guernsey grower. These are noticed in our Crystal Palace report. Messrs. Camell & Sons staged a wonderful collection of Gourds, Squashes, and Pumpkins; and Messrs. Harrison and Sons, Leicester, had thirty-nine dishes of Onions. A very large collection of Potatoes, in dishes, came from Mr. R. D. Green, Wisbech.

A group of very tall and magnificently grown *Celosias* was staged by the Earl of Radnor (gardener, Mr. Hazelton), Longford Castle. Mr. W. J. Godfrey, Exmouth Nurseries, Devon, had a table with specimen Japanese Chrysanthemum blooms, amongst them being the new Edward VII., Dazzler, Godfrey's Triumph, Queen Alexandra, Attraction, Exmouth Rival, Sensation, Exmouth Crimson, and Godfrey's Masterpiece.

Messrs. John Peed and Son, West Norwood, London, S.E., sent Apples and Grapes.

Lord Suffield (gardener, Mr. William Allen), Gunton Park, Norwich, staged a fine seedling Apple named Norfolk Beauty, which obtained an Award of Merit. He had also dishes of Pears.

H. B. Holden, Esq. (Mr. H. Walters), Eastwell Park, staged a collection of fruit, including some splendid Melons, Apples, and Grapes. The table was as effective as we have ever seen.

Orchids.

Mr. W. H. White, Orchid grower to Sir Trevor Lawrence, Bart., Dorking, contributed a magnificent plant of *Cattleya Bowringiana*. There were eight spikes of exceptionally richly hued flowers. Mr. White also sent well grown examples of *Habenaria carnea*, *H. militaris*, and *Sopliro-Cattleya Chamberlainiana*, with one or two others. Mr. A. Chapman, gardener to Captain Holford, Westonbirt, Tetbury, sent a pair of wonderfully fine baskets of *Vanda Kimballiana*. Mr. W. P. Bound, gardener to J. Colman, Esq., Reigate, had a small group of Orchids, comprising *Dendrobium Phalaenopsis* and others in good form.

Some grandly grown examples of *Oncidium Forbesi* were shown by Messrs. Charlesworth and Co., Heaton, Bradford; the spikes were exceptionally good. This firm sent also one or two *Cattleyas* and *Laelio-Cattleyas*. Mr. W. H. Young, Orchid

grower to Sir Fred Wigan, Bart., Clare Lawn, East Sheen, arranged a raised group of Orchids, in which *Cattleya Bowringiana* Lady Wigan, *Stenoglottis longifolia*, *Cœlogyne ocellata*, and *Vanda Sanderiana* were conspicuous. Mr. G. Whitelegge, gardener to J. Bradshaw, Esq., Southgate, staged *Cattleya Mantini nobilior*, C. J. Baguley, and C. Parthenia Prince of Wales in splendid condition. Small exhibits of Orchids were made by Messrs. J. Veitch and Sons and others.

Medals: Floral Committee.

Gold to Messrs. J. Veitch and Sons, Chelsea, for *Nepenthes* and herbaceous plants. Silver-gilt Flora to Mr. G. Prince, Longworth, Berks, for Roses; to Mr. H. J. Jones, Lewisham, for Michaelmas Daisies and Chrysanthemums. Silver Flora to Messrs. W. Wells and Co., Earlswood, Redhill, for Chrysanthemums; to Messrs. J. Cheal and Sons, Crawley, for Dahlias and autumn foliage; and to Mr. Russell, Richmond, for *Skimmias* and *Euonymuses*. Bronze Flora to Messrs. T. S. Ware, Limited, Hale Farm Nurseries, Feltham, for Dahlias and hardy flowers. Silver Banksian to Messrs. Cutbush and Son, Highgate, for berried plants. Bronze Banksian to Earl of Radnor, Longford Castle, Salisbury, for *Celosias*. Bronze Flora to Messrs. Barr and Sons, Covent Garden, for hardy flowers.

Fruit Committee.

Silver-gilt Knightian to Messrs. H. Cannell and Sons, Swanley, for Gourds; Silver Knightian to H. V. Holden, Esq., Ashford, for a collection of fruit. Silver Banksian Medals to Mr. R. D. Green, Wisbech, for collection of Potatoes; to Messrs. Harrison and Sons, Leicester, for Onions; to Mr. W. Allen, Norwich, for Pears; to Mr. W. B. Orr, Loughall, for two packing packages of Apples; to Messrs. J. Peed and Son, West Norwood, for Apples.

Certificates and Awards of Merit.

Apple Norfolk Beauty (W. Allen).—A large yellow-skinned seedling Apple, even and well built; much larger than Golden Noble (Award of Merit).

Aster cordifolius profusus (E. Beckett).—A wonderfully free-flowering variety; the colour is pale lilac (Award of Merit).

Aster Enchantress (E. Beckett).—A tall-growing variety of graceful habit; the flowers are small and soft rose in colour (Award of Merit).

Cattleya Haroldiana (Charlesworth & Co.).—This is from a cross between *Lælia tenebrosa* and *Cattleya Hardyana*. The sepals are green at the base and crimson brown at the tips. The petals are dull crimson. The lip is crimson suffused purple (F.C.C.).

Cattleya Iris aureo-marginata (Charlesworth & Co.).—A particularly handsome *Cattleya* from C. bicolor and C. aurea. The stout sepals and petals are brown margined with yellow, the lip is crimson maroon (F.C.C.).

Cattleya Lottie (Charlesworth & Co.).—The petals are short and broad, rose purple suffused crimson in colour; the sepals are similar. The lip is richest crimson purple. It is a hybrid from C. Acklandiae and C. Trianae Backhousiana (Award of Merit).

Cattleya Lady Ingram, Maron's variety (C. Bond).—A charming Orchid. The sepals and petals are rich rose; the outer portion of the lip is crimson and the inner deep yellow (Award of Merit).

Chrysanthemum Mrs. J. W. Pockett (W. Wells).—A fine reflexed Japanese with narrow florets of a soft yellow colour (Award of Merit).

Chrysanthemum Masterpiece (W. J. Godfrey).—A striking Japanese, the florets of which incurve at the tips; the colour is crimson with a buff reverse (Award of Merit).

Lælio-Cattleya Wilsoniae (W. H. Young).—This is from a cross between *Lælia Dayana* and *Cattleya labiata*. The sepals and petals are soft purple rose, and the lip rich velvety crimson (Award of Merit).

Nepenthes ventricosa (J. Veitch & Sons).—A small pitcher species of the Burkei type. The colour is greenish rose, and the pitcher widens towards the mouth (F.C.C.).

Nerine Mrs. Elliot (H. J. Elwes).—A very fine flower of great substance; the colour is soft salmon (Award of Merit).

Plum Brown's Crimson Drop (James Brown, Reigate).—This fine Plum received an Award of Merit.

United Horticultural.

Annual Dinner.

This annual function was successfully held in the Venetian Room of the Holborn Restaurant, London, on Wednesday, October 9, when about 200 members and friends were presided over by genial Peter Kay, V.M.H., the well-known market-man from Finchley. The usual notable London horticulturists supported the chairman, and with song, toast, and speech a most pleasant evening was recorded. Many of the country members who had come up for the Crystal Palace Show were present, and perhaps Mr. R. Morse, who advocated having the annual dinner on the eve of the Palace Show, through the pages of the Journal, must have been gratified, as he was, indeed, to have seen his advocacy thus cordially responded to. Amongst those who proposed toasts were the chairman, Mr. George Bunyard, Mr. Richard Dean, Mr. Pockett, a visitor from Melbourne; Mr.

Assbee, Mr. J. Hudson, and others. The latter gentleman, as treasurer, in recording the position, functions, and aims of the society, stated it to be his belief that in the "United Horticultural," Mr. Chamberlain has the nearest approach for a model of his Old Age Pensions scheme that is at present in existence; with the society's permission he proposed to send Mr. Chamberlain the rules and balance sheet, a proposition which drew forth applause. We had hoped to publish a few more particulars, but space is very precious this week. Mr. W. Collins, the secretary, may yet also send us a list of the subscriptions.

A report of the monthly meeting, held at the Caledonian Hotel, on Monday evening last, follows:—Mr. C. H. Curtis occupied the chair. Seven new members were elected. Two members are on the Sick Fund at the present time. It was resolved that the committee meetings should commence at seven o'clock instead of eight from October to March, inclusive. The treasurer reported a balance in hand of £79 8s. 10d. It was unanimously resolved that a vote of condolence be sent to Messrs. Sutton and Sons, of Reading, on the death of the late Mr. Martin Hope Sutton.

Beckenham Horticultural.

The first lecture of the sessions 1901-2, entitled, "Experiments with Chemical Manures," by Mr. F. W. E. Shrivell, F.L.S., was given on Friday evening last, to a good audience, Mr. Burge presiding. The value of fairly fresh farmyard manure to heavy soils mechanically, and in a more decomposed state for light soils, aiding the retention of moisture, received due recognition. The lecturer pointed out that some crops could be grown quite successfully by the use of chemical manure alone, remarking the Brassica tribe; while Potatoes gave the best results with farmyard and chemical manures combined. Peat moss, in the lecturer's estimation, where used in stables, was double the value of straw, it retaining more of the urine. Several formulas were given for the guidance of those using chemical manures. For herbaceous borders: 100 square yards, basic slag, 14lb; kainit, 8lb; both applied in autumn; nitrate of soda, 8lb, applied in spring in two dressings. For lawns: 100 square yards, basic slag, 15lb; kainit, 9lb; applied in autumn; nitrate of soda, 5lb, applied in spring in two dressings. For kitchen garden: 100 square yards, $\frac{1}{2}$ load of farmyard manure; superphosphate, 14lb; kainit, 10lb; applied in autumn; nitrate of soda, 10lb, applied in spring in two dressings.

A hearty vote of thanks was accorded Mr. Shrivell for his very instructive discourse. Mr. Barnes placed upon the table excellent examples of the popular Cactus Dahlias, another member contributing a dish of Tomatoes. On the 25th Mr. H. J. Chapman will lecture on "Orchid Hybridisation, its Advantages from a Grower's Point of View." Perhaps some of our near neighbours would like to hear Mr. Chapman. The lecture, at 8 p.m., is free, in the Church House, almost close to Beckenham Junction.—T. C.

Reading Gardeners' Mutual Improvement Association.

The first meeting of the winter session in connection with the above association was held on the 7th inst., and was largely attended, about 120 members being present. Before proceeding with the ordinary business, the chairman (Mr. T. Neve), referred to the great loss that the horticultural world had sustained through the death of the venerable Mr. Martin Hope Sutton, and also to the great interest the late gentleman took in the gardeners of the district. The subject for the evening was, "Early Flowering Chrysanthemums, the best varieties to grow and their culture," by Mr. W. Wells, of Earlswood. The lecturer described the varieties he considered the best to grow, his reasons for their selection, and the method of culture he adopted. Amongst the whites were Mytchett White, Parisiana, Market White, Madame Desgrange, &c. Yellows: Yellow Marie Masse, Miss Ruth Williams, Mrs. Burrell, &c. Crimson: Goacher's Crimson, Harvest Home, Crimson Marie Masse, &c. Pinks: Madame Marie Masse, Gustave Gunnerwald, Charles Jolby, &c. Terra Cotta, Orange and Salmon.—Shades: Orange Masse, Ivy Shark, Moliere, Countess Foucher de Carriel, &c. Bronze: Bronze Prince, Louis Lemaire, and Mytchett Glory. When the plants were required for the decoration of the greenhouse or conservatory, it was best to grow them in the open air until the flower buds showed colour, when they should be lifted and potted. The lecture was made particularly instructive by an exhibit by Mr. Wells of blooms of between forty and fifty varieties grown in the open air, which were referred to as the various sorts were discussed. A discussion followed which, however, turned chiefly on the "Rust"; those taking part were Messrs. Neve, Wilson, Woolford, Hinton, House, Townsend, Ager, Fry, and Lees. Mr. Hinton, The Gardens, Walmer, Reading, staged some splendid blooms of Soliel d'Octobre, Rayonnant, and Miss A. Byron Chrysanthemums; whilst Mr. D. Ager, gardener to Milton Bode, Esq., made a pretty decorative exhibit of Chrysanthemums, autumn leaves, and berries. Although twenty-four meetings have been held during the past year, at each of which new members were elected, yet on this occasion nine more were added to the roll.

Young Gardeners' Domain.

Hints for Young Heads.

(Continued from page 208.)

The tropical plant house is, or should be, an important feature of a well-kept garden, and no pains should be spared to have its inmates in that happy condition which bespeaks unremitting care and high culture. The enthusiast will, indeed, think no trouble too great, or any detail too small to accomplish this, and it will be his endeavour to grow only the best varieties of each species—the best of everything and everything of the best. As this phase of gardening is also to some extent an expensive item in the garden balance-sheet, it goes without saying that the greater the return shown for the expenditure the greater the profit, or its equivalent, pleasure, on the credit side. By the way, tropical house, if the stove may be thus called, seems to be the better name; anyway, it will prevent any such catastrophe as that which occurred with “the new boy,” who, when told to put some plants in the stove, quickly had them crackling in the furnace. Apropos of this, it simplifies matters considerably to number the houses consecutively, the least objectionable method being to incise Roman numerals neatly with a chisel on the door head, and colour them black.

With the heating of this plant house we may have little to do, all that has probably been done before, but if not well done, and it is most unsatisfactory not to have a sufficiency of heat at command, the young head gardener who finds himself thus handicapped will wisely endeavour to rectify it at the start. In reserve power lies safety. Driving a boiler at its highest tension courts disaster. There is nothing more important than the maintenance of a comfortable night temperature during the early summer months, with a corresponding increase by day from sun heat or otherwise, and it is false economy to dispense with artificial heat till such time as the season is far advanced, when an anxiety to regain lost time defeats its object by causing a late sickly growth with constitutional troubles to come. One could hardly over-emphasise this point in culture. Good specimen Codæums and similar things, when encouraged to make their growth under the best conditions of light and warmth our short seasons afford, rest in comparative safety under adverse conditions during winter, and cheerfully respond the following year in vigorous growth.

The ministering hand, guided by an observant eye, will grasp those nicer details of culture which no amount of teaching or preaching can ever give, and in no instance is this intuitive accomplishment better exemplified than in temperature and its concomitant auxiliary, a genial atmosphere. At first sight temperature and atmosphere may appear to be identical. That is not so. High temperature and deficient moisture, or low temperature and an excess of it, will always bring a feeling of discomfort to the cultivator who is in perfect sympathy with his plants. Fire heat is to some extent, however, a necessary evil, hence no more than is really wanted will be used, but what is actually required must not be denied. As a rule, fires are started too late on a summer's morning, and often started when they should remain undisturbed. Here a young practitioner must learn to anticipate what a day is likely to bring forth, and act accordingly. Much of the fuel which is worse than wasted in the morning might be advantageously applied in the evening to keep the plant house comfortable during a cold night, so often experienced in early summer.

To do the right thing at the right time is a golden rule in gardening and applicable to every phase of it. Thus, in potting, for instance, the best results cannot be expected when the doctrine of “the altogether” impels a man to begin and finish with the one operation. As plants are ready for potting then is the time, neither before nor after, and what shall it profit a man who says in his haste, “I will have a fine specimen by hurrying a plant in a pot several sizes too large for it?” More haste less speed. Small shifts and often is a good principle when potting on the choicer and more delicate growing hothouse plants; and, indeed, may apply to all the inmates of our houses, for if a plant is worth growing at all it is worth growing well, and the aim of the cultivator should be the best possible, which does not imply size alone, but for whatever purpose such plants are intended. It is often the case that young plants from the propagating pit will take two or three shifts during the summer, thus being built up from a good foundation into vigorous specimens. Again may the value of rough potting material, previously spoken of in relation to the propagating pit, be impressed. All fine compost is an utter abomination to the smart grower of specimen plants, and should be rigorously excluded. If any doubting ones at the potting bench disposed to question this will try it, they will probably no longer halt between two opinions. Common-sense potting paves the way to judicious watering, and considerably minimises the dangers which lay in this direction. An over-potted plant is invariably an over-watered plant, and a sickly one to boot. Ample space between the pot rim and the soil, a simple matter often neglected, facilitates watering, which is usually a daily operation, that is,

the houses will require to be looked over daily, and plants that are dry require water, those that are not don't. Under certain obvious conditions twice daily will be necessary, and some nice discrimination is necessary for a young hand to become handy with the waterpot.

Slip-slop watering is intolerable and decidedly pernicious in its effects. Back from the past comes the memory of a whistling boy who slovenly swished out the water to the tune of a slow march. Often was he followed up and plants turned out to show him that surface wetting of a dry ball was not watering; but the tootling habit was strong. He has tootled through life in place and out of place, often the latter, a very good man, but a very poor gardener. Boys, don't tootle at work, concentrate your mind upon it and leave politicians to “Rule Britannia.”—AN OLD BOY.

(To be continued.)



Hardy Fruit Garden.

LIFTING AND REPLANTING YOUNG TREES.—Where fruit trees are making over-vigorous growth, especially young trees that have not fruited, it is absolutely necessary to afford some judicious check. This is best done by careful lifting and replanting, cutting back the strongest roots in the process. Fan-trained wall trees, such as Peaches, Nectarines, and Plums, are very apt to make strong growth, which is of an unfruitful character, especially if the ground should be rich and loose. In such cases the removal of the trees will effect an improvement in producing a sturdy and vigorous, but yet short-jointed growth. The roots will be more fibrous, and will spread laterally rather than strike deeply. Bush trees, or any forms of young fruit trees that show a tendency to run away to wood, may be improved by lifting. The best method of procedure is to cut a trench round the stem at a safe distance, say 2ft or 3ft, according to the size of the tree and its probable extension of roots. In taking out this trench, if no roots are met with, work the soil away until the ball of roots appears to be of a portable size for moving. When this can be readily effected, and a fair quantity of soil adheres, detach the ball from its position, and work in fresh material, making it firm so as to raise the base, that when replanted the trees will be higher than heretofore. Let the soil be made very firm, as it is only by doing this that the growth will assume a fruitful character. The introduction of rich compost round the roots must be avoided. Good loam or the fertile staple of the surrounding ground forms a suitable medium for fresh rooting. For stone fruits the soil may advantageously be mixed with lime rubbish or pulverised mortar. After lifting, the soil over the roots may be lightly mulched with some flaky manure.

ROOT-PRUNING OLD TREES.—Old and long established trees cannot be lifted and replanted with the same chance of their doing well afterwards; but over-strong and vigorous trees may be checked by root-pruning. Take out a trench as if for lifting not less than 3ft from the stem. The trench may go down fairly deeply, and all strong roots found cut off close to the side of the trench with the spade, afterwards paring them smoothly with the knife. In many cases it is the strong tap root which passes perpendicularly down into the subsoil that causes the extra vigour and prevents fruiting. The ball of roots ought, therefore, to be undermined, and the tap root severed. In the neighbourhood of this there may also be other strong descending roots, and these, too, may be dealt with in a similar manner. In filling in the soil again, make it firm, quite as firm as the inner ball of soil. It may not be advisable to root-prune all round at once, especially where many strong roots abound. Therefore, if half is done one season, and half another year, this may prove to be the best. It is, at all events, the safest plan. It renders the work easier, and improves the trees gradually.

THINNING BRANCHES.—Where the branches of fruit trees, growing in any form, are too thickly placed, it is highly desirable that they be thinned out. On walls especially, each branch or cordon ought to have a clear space of a foot. This in some trees may necessitate taking out every other branch. Bush and pyramid trees ought also to be dealt with by removing crossing and inter-crossing branches. After the fruit is removed, and before the leaves fall, it can readily be seen which are the most crowded parts of the trees. It is better to do the work at this period than in winter.

PEACHES AND NECTARINES.—These wall fruits having now had the crop gathered, the trees may be overhauled, and the branches regulated. Cut out all superfluous and half-exhausted

branches, together with growths that have borne the crop, filling up the vacant spaces with the successional shoots. The trees have a better chance of becoming thoroughly ripened when superfluous material is removed now.

MORELLO CHERRIES.—As these trees on walls require a considerable quantity of old bearing shoots and other growths removing, it is essential to commence early, and make room for laying in the reserved growths. Although these may be laid in somewhat more thickly than in other wall trees, it is requisite in doing so not to overcrowd. This can best be judged by carrying out the work at once while foliage still remains. A good supply of young growths produces the best crops. Spur growths may, however, be encouraged where there is room to accommodate them. Surplus growths situated in convenient positions may, therefore, instead of being cut out entirely, be shortened to a few buds.

PREPARING SOIL FOR PLANTING.—The great advantage of having the ground ready when new trees are received is obvious. All stations, quarters, or borders should, therefore, be now thoroughly well prepared. This consists mainly, if not entirely, of deep digging. For the larger fruits, consisting chiefly of Apples, Pears, Plums, and Cherries, the soil must not be over-enriched, as, if so, strong growth ensues, which is not fruitful. Well broken up ground, both as regards the surface and subsoil, will give the trees a good start. The soil may afterwards be enriched when necessary by surface mulchings and other means. The addition of good loam will improve poor soil, and when the trees are planted give them some special material to root in.—LYMINGTON, HANTS.

Fruit Forcing.

EARLIEST FORCED PEACHES.—Whether the house is planted with the varieties Hale's Early, Stirling Castle, Royal George, Dymond, and similar second early and midseason Peaches, along with Lord Napier, Stanwick Elruge, and Dryden Nectarines, or the sorts consist of Alexander or Waterloo and Early Louise Peaches, with Cardinal and Early Rivers Nectarines, the trees will have been at rest for some time, and having been dressed and everything put into proper order, but little beyond keeping as cool as possible will be required until starting them. If these matters, referred to in former calendars, have not been attended to, we urge their being done without further delay, as the trees of the first-named varieties must be started at the beginning of December to have ripe fruit at the end of April or beginning of May; but if of the last-mentioned varieties the house need not be closed until the close of December and the forcing commenced at the new year. This is a clear gain of one month's time and expense in forcing Peaches and Nectarines.

SUCCESSION HOUSES.—The trees will be in various stages of maturing the foliage, according to time of starting, but this must not be hurried by removing the leaves forcibly. If ripening tardily, admit air freely at night, keeping the houses rather close in the early part of the day, and maintaining a dry atmosphere. Seek gradual maturation, when the leaves will part freely from the trees. When the leaves are all down unfasten the trees from the trellis, perform any pruning required, cleanse the house thoroughly, paint the woodwork and trellis if necessary, and dress the trees with an insecticide. Secure the trees to the trellis, leaving room in the ligatures for the branches to swell, as tight tying is one of the most prevalent causes of gumming.

Remove the surface soil down to the roots, and supply fresh loam rather stiff, sprinkling a handful of a mixture of steamed bonemeal and wood ashes in equal parts on each square yard, scratching in lightly with a fork. If wood ashes are not forthcoming, use two parts sulphate of potash, one part sulphate of magnesia, and half a part sulphate of iron to three parts of steamed bonemeal, mixed, and 4oz of the mixture per square yard. Give a thorough supply of water to inside borders of houses with fixed roofs, but it is better to remove the roof-lights and allow the borders to become thoroughly soaked by the autumn rains.

Any lifting and root-pruning of trees in an unsatisfactory state should be attended to whilst the leaves are upon the trees, not, however, until the foliage becomes mature, and then acting with despatch. If fresh trees have to be introduced, it should be performed when they are safe for removal, namely, when the leaves part readily from them, or as soon as they are nearly off the trees. The best description of trees for planting in houses are those three or four years trained to walls or to trellises under glass, and prepared for safe removal by annual or biennial lifting.

Such trees transplant safely with abundance of fibrous roots. Carefully planted, they can be forced the first year with every confidence of a crop if not started before the new year, not brought on too rapidly, and not overcrowded. It is always desirable to select trained trees in bearing in preference to planting young trees that are not furnished with some bearing wood; but if young trees must be planted, choose such as have a well-furnished base, free from gumming, not very strong in the wood, and that well matured.—ST. ALBANS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

CŒLOGYNE CRISTATA (W. H. Pain).—As a rule, water is partially withheld from *Cœlogyne cristata* and its varieties from the time the growths are completed until the flower sprays begin to push up in early spring. Enough water should be given at all times to prevent the pseudo-bulbs from shrivelling.

RUST ON CHRYSANTHEMUMS (C. W.).—The remedy to which you probably refer is Veltha Emulsion, a preparation advertised and referred to by correspondents in our columns. It is prepared and sold by Messrs. William Wood and Son, Wood Green, London, N. Potassium sulphide solution, 1oz to three gallons of water, will destroy the spores of the fungus, but not the mycelial hyphae in the tissues of the leaves, hence it is necessary to repeat the application at intervals of a few days to successfully combat the fungus. The potassium sulphide solution, however, cannot well be used under glass, as it discolours paint; but there is no objection to its use outside, or even indoors, only keep from paint. It is necessary to reach the under side of the leaves, laying the plants on their sides and turning over, so as to wet every part with the solution. The sulphide should be dissolved in a quart of hot water, then make up to three gallons with cold water. It is desirable to add 6oz of soft-soap to the solution, dissolving this in hot water and allowing to become cool before adding to the dissolved sulphide, and then mixing thoroughly.

SPREADING EARTH ON LAWN TENNIS GROUND (Kittie).—Much may be done in the way you propose, placing sifted earth or compost in the hollow places and spreading evenly, then levelling by means of a wooden rake and afterwards making quite even in surface with the back of rake. It is not advisable to cover the grass more deeply than $\frac{1}{2}$ in at a time, and allow the mould to lie rather loosely for a time, so that the blades of grass may come through, when it may be rolled well down. In a similar case we gave the lawn a top-dressing of compost all over in the autumn at the rate of twenty tons per acre, $2\frac{1}{2}$ cwt per rod, spreading evenly, and leaving until February, or the first mild and fair weather afterwards—the material not sticking to the feet—then raked over with a wooden rake, and making as even in surface as possible. In doing this the top-dressing was drawn from the higher parts into the hollows, there being a very slight dressing, or scarcely any, left on the former, and thus the inequalities of surface were made correspondingly even. After clearing off the rubbish and picking off any stones, the lawn was well rolled when the grass had sprung through the top-dressing, and it was greatly improved in evenness of surface and in quality of grass, the lawn being kept duly mown and well rolled.

VINE ROOTS SWOLLEN (Grape Grower).—The thickest roots are much enlarged, probably from the attacks of root-mites, though such enlargements frequently arise from a bad state of the border, which occasions an undue formation of bark and its recurring annual accumulation. The Vines, or rather Nature, have shown an aptitude transcending that of the border-maker, as "the roots have gone through a 4ft path into a flower border quite 3yds away from the border." The border for the Vines being quite 4ft deep with soil, and the bottom cemented, it would be well to provide a drain at the lowest part of the latter and whole length of the border, it having proper fall and outlet, and then place in a foot depth of drainage from half-brick size at bottom to road metal sized pieces at top, and on this place a 3in layer of old mortar rubbish freed from laths and other pieces of wood. This will leave 2ft 9in, which is quite ample for compost. This may consist of ten parts turfy loam of medium texture, fresh horse droppings one part, old mortar or lime rubbish one part, and bones, crushed, 1in down to $\frac{1}{2}$ in, one-fiftieth part, mixed. In the top foot of this compost the roots should be spread out evenly and in layers, the uppermost roots being covered with about 3in of soil. It would be advisable to have the border bricked in front, so as to confine the roots to the border, especially as the bottom is cemented. Of course, proper drainage is provided, and with roots in more favourable circumstances the Vines should improve, and produce well finished Grapes. Crushed $\frac{1}{2}$ in bones are suitable.

ANEMONE ROOT INFESTED WITH LARVA (P. K.).—The root is certainly infested by caterpillars, which have eaten into the fleshy part of the roots in a dried state. They are the larvæ of some moth, and evidently one of the Tortrices, the larva pointing to a *Carpocapsa*, and that infesting dried fruits. The silver fly was not found, but it probably was the moth, and cause of the mischief. It is not likely the moth will attack plants in the ground. We have not before had such phenomenon brought to our notice, and shall keep the caterpillar in order to secure the moth in due course and identify it, if possible.

VINES FOR WALL OF RESIDENCE WITH SOUTH ASPECT (J. P.).—The best white Grape is Chasselas Vibert, which produces larger berries and ripens about a week earlier than Royal Muscadine. Black July is the most reliable black outdoor Grape, but in a hot position, such as you describe, Black Prince (Cambridge Botanic Garden) does well, being one of the best black Grapes for the open air, though in quality it is far inferior to Black Hamburgh. The last-named ripens its fruit very well in some warm seasons, and is suitable for planting in a position such as you describe. Our experience points to Chasselas Vibert and Black Hamburgh as most suitable for your circumstances.

NAMES OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (W. H. Budge).—The smaller and rounder Pear was Gansel's Bergamot, figured on page 333 last week; the other one was Louise Bonne de Jersey. Separate samples should be numbered. (D. Masters).—Apple Pickering Seedling; 2, Pear. 1, Marie Louise d'Uccle; 2, Maréchal de la Cour. (J. C.).—1, Golden Noble; 2, Reimette du Canada; 3, Northern Greening; 4, Royal Russet; 5, Lane's Prince Albert; 6, Striped Beefing. (D. E. Holtby).—1, Apple Bismarck. (D. E. Holtby).—Second lot: 1, Dutch Mignonne; 2, Ecklinville. (G. D.).—King of the Pippins; 2, Fearn's Pippin; 3, Queen Caroline; 4, Warner's King; 5, Belle de Pontoise; 6, Northern Greening. (J. McC.).—1, Warner's King; 2, Ecklinville Seedling; 3, Tower of Glammis; 4, Emily Childs; 5, Redstreak; 6, Duchess of Gloucester; 7, King of the Pippins; 8, Manks Codlin.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. S. C.).—*Skimmia japonica*. (R. G.).—*Miscanthus zebrinus variegatus*; 2, *Adiantum Faulkneri*; 3, *Acorus Pseudo-acorus*. (A. A.).—1, *Aster Novæ-Belgii* var.; 2, *Solanum jasminoides*. (P.).—*Lycasteria formosa*; 2, *Helianthus orgyalis*; 3, *Tradescantia virginica*; 4, *Aster laevis*. (F. N. P.).—1, *Koeleruteria paniculata*; 2, *Epidendrum radicans*.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Trade Catalogues Received.

Geo. Cooling & Sons, Bath.—*Roses, Fruit Trees, Shrubs.*
H. Cannell & Sons, Swanley, Kent.—*Autumn Catalogue.*
F. C. Heinemann, Erfurt, Germany.—*Special Trade List of Novelties and Specialities.*
Harlan P. Kelsey, Tremont Buildings, Boston, Mass., U.S.A.—*Hardy American Plants and Carolina Mountain Flowers.*
Otto Putz, Erfurt, Germany.—*Flower Seed Novelties for 1902.*
Frederick Roemer, seed grower, Quedlinburg, Germany.—*Novelties in Flower Seeds for 1902.*

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary,* Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary,* Mr. W. Collins, 9, Martindale Road, Ballam, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary,* Mr. Brian Wynne, 8, Danes Inn, Strand, London, W.C.

PUBLICATIONS RECEIVED.—"Le Mois Scientifique." Septembre-Octobre; a monthly review of natural history, agriculture, horticulture, physiology, chemistry, industry. "Le Moniteur d'Horticulture." "Le Jardin." Octobre 5. Board of Agriculture—"Agricultural Returns;" statistical tables, showing acreage under crops and grass, and number of horses, cattle, sheep, pigs in the United Kingdom, with particulars for each county of 1901. "The Canadian Horticulturist." "Kew Bulletin of Miscellaneous Information," April-June, 1901. "Gartenflora."

Covent Garden Market.—October 16th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Melons, each	0 9	to 1 0
" dessert, ...	3 0	6 0	Pears, English, ½ sieve	2 0	6 0
Bananas, ...	8 0	12 0	Pears, French, crate...	4 0	9 0
Cobnuts, lb. ...	0 8	0 9	Pines, St. Michael's,		
Figs, green, doz...	1 6	2 0	each ...	3 0	4 6
Grapes, Hamburgh, lb.	0 6	1 0	Plums, ½ sieve	2 0	3 0
" Muscat ...	1 0	2 6	Walnuts, ½ sieve ...	2 0	3 0
Lemons, Naples, case	24 0	30 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Horseradish, bunch	1 0	to 0 10
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1 ½	0 2
Batavia, doz.	2 0	0 0	Lettuce, Cos, doz...	1 0	2 0
Beans, French, bushel	1 0	2 0	Mushrooms, forced, lb.	0 8	0 9
Beet, red, doz.	0 6	0 0	Mustard & Cress, pint.	0 2	0 0
Brussels Sprouts, ½ sieve	2 0	2 3	Parsley, doz. bnchs	2 0	5 10
Cabbages, tally	1 6	3 0	Potatoes, English, cwt.	3 0	5 10
Carrots, new, doz. bnch.	3 0	7 0	Radishes, doz.	0 6	0 9
Cauliflower, tally	6 0	8 0	Shallots, lb. ...	0 2	0 3
Corn Salad, strike	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	2 0	3 0	Tomatoes, English, lb.	0 2	0 2 ½
Endive, doz.	1 0	1 3	Turnips, doz. bnch.	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Ficus elastica, doz.	9 0	to 12 0
Araucaria, doz.	12 0	30 0	Foliage plants, var, each	1 0	5 0
Aspidistra, doz.	18 0	36 0	Lycopodiums, doz.	3 0	0 0
Chrysanthemums, doz.	6 0	30 0	Marguerite Daisy, doz.	6 0	9 0
Crotons, doz.	18 0	30 0	Myrtles, doz.	6 0	9 0
Dracæna, var., doz.	12 0	30 0	Palms, in var., doz.	15 0	30 0
Dracæna, viridis, doz.	9 0	18 0	" specimens	21 0	63 0
Erica gracilis, doz.	10 0	12 0	Primulas	3 0	4 0
" caffra, doz.	15 0	18 0	Shrubs, in pots	4 0	6 0
Ferns, var, doz.	4 0	18 0	Solanums	8 0	10 0
" small, 100...	10 0	16 0			

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bnch.	1 0	to 2 0	Mignonette, English,		
Carnations, 12 blooms	1 0	1 3	doz. ...	0 9	to 1 6
Cattleyas, doz.	12 0	18 0	Marguerites, white,		
Chrysanthemums,			doz. bnchs.	1 0	2 0
specimen blooms,			" yellow, doz. bnchs.	0 6	1 0
doz. ...	1 0	4 0	Odontoglossums	4 0	5 0
" white, doz. bnchs.	2 0	4 0	Roses, Niphetos, white,		
" coloured, doz. bnchs	2 0	3 0	doz. ...	1 0	2 0
Eucharis, doz.	1 6	2 0	" pink, doz.	1 0	3 0
Gardenias, doz.	1 6	2 0	" yellow, doz. (Perles)	1 0	1 6
Geranium, scarlet, doz.			" red, doz.	0 6	1 0
bnchs.	3 0	4 0	Smilax, bnch	1 0	2 6
Lilium lancifolium alb.	1 6	2 0	Stephanotis, doz.	3 0	0 0
" rubrum	1 3	1 6	Stock, white, doz. bnchs	1 6	2 0
" longiflorum	3 0	4 0	" coloured, doz. bnchs	3 0	0 0
Lily of the Valley, 12			Tuberose, gross	4 0	5 0
bnchs	12 0	18 0	Violets, single, doz	1 0	1 6
Maidenhair Fern, doz.			" double, doz.	3 0	4 0
bnchs.	3 0	4 0			



On Some Minor Immoralities.

"He that would thrive must the white sparrow see," says an old German proverb. We remember reading a tale as to how the farmer sought high and low for this wonderful bird, which was only to be seen at early dawn or nightfall. He did not find the sparrow, but he found many other things of which he had previously had no notion, and he broke himself effectually of the habit of lie-a-bed. No day is long enough for the work allotted it—at least we find it so, and it does seem a pity to lose any of the early morning hours in merely idle sleep—that is, sleep that we do not absolutely need, and we can make very little do when pleasure is a-foot. Does any man ever calculate how many days of his master's time he wastes in the year by being late even a few minutes each morning? or does he consider how unfair a thing it is to leave off a job nearly done because it is just on supper time? Does he, again, ever remember the wet

days, when his master can perhaps with difficulty find him work so that his family may not be docked of a day's pay? He should put that into the scale against those unfinished jobs, and then see how matters weigh out. We know a horseman who has lost several good places simply because no power on earth could get him out of bed in the morning. One employer made a little investigation, and found that this man never retired to bed before eleven. Was it likely he could be up and about his work in good time in the morning? We employers of labour do not stand watch in hand and note the exact time of our servant's arrival on the scene of his labours, nor do we knock off pay for a few minutes' lateness, yet we contend we ought to have full time for full pay. It is a good thing where the farmer every now and then makes an early tour of his fields—it strengthens the authority of his foreman, and it enables him to see who are the laggards, and by how much they lag.

There is great waste of time often arising from badly planned work. This is not the fault of the worker so much as of the executive. Master and foreman are not up to much if they cannot, the night before, arrange (barring weather) the best plan of work for the following day; how the horses may all be used, and how the men may have no useless running to and fro after little tiresome jobs. On a farm the waste of power, and also of food, may be most considerable, and it is for men to aid masters in the suppression of this kind of wrong-doing. It may be tiresome, but it certainly is most necessary that all horse corn be kept under lock and key, and only given out by weight. In olden days, when oats were the staple horse food, it used to be the plan to have two or three days thrashing and then let the horseman run at the heap on the granary floor. The same applies to pig-meal, and also to hen-corn. We could tell sad tales of (over-true, too) pigs being fattened on the Corn that belonged of right to the master's fowls, and we sadly fear bits of oil-cake have gone the same way. We know, too, of Corn being taken and ground for flour by the very man who was put by the master in charge, and his confidence thus terribly abused. It is always well to count cakes on delivery, for there are plenty of unscrupulous men who would think nothing of tempting a waggoner to give them a cake or two when returning with the teams from the local oil mill. These things are done, and done constantly, and lads are sometimes tempted beyond their strength. The same applies to cut meat or chaffed straws. Cases of this kind have come under our knowledge, and give us a very painful impression as to the rectitude of mankind in general. We know lads are often tempted to take eggs, not for themselves but for their horses, under the mistaken notion that it gives a fine lustre to the coats. The lustre should come from plenty of elbow grease, not from stolen food.

How many a cow has been wasted by improper milking. A cow should be milked dry. The last drops are always the richest. A cow should be milked gently, and handled without harshness. A heifer's temper is easily made or marred, and kicking cows are often the outcome of bad usage.

It is not legitimate wear and tear that so runs up items in the tradesmen's bills. We all know things wear out, but how is their end hastened by rough, careless usage. Some men have no idea of order; forks, rakes, buckets, chaff baskets, and bags are just tossed down anywhere, to be trampled on or run over, or possibly lost altogether, and a foreman or master has no business to be continually on the outlook to prevent leakage in this form. Some men are very handy, and can do many little repairs themselves, and others are just as useless—always ready to run to the wheelwright or blacksmith, forgetting that each item means so much hard cash. This habit of carelessness follows a man into the stable and the field, makes him neglectful of his horses, of their careful and proper feeding, and hurries him over their cleaning and grooming. Good food and pure water, administered at suitable intervals, and with clock-like regularity, are the best preservatives of health, and the whole system responds most readily to a carefully groomed coat. We know the effect of a good rough towel on our own backs, so we can judge of the pleasant sensations to a horse when his body is well rubbed down. Nothing is more aggravating to a master than a crookedly drilled piece of Corn, or worse, where one spout has been stopped up and no Corn drilled at all!

A careless lad oftentimes grows into a careless man, and there is now a great difficulty in finding a youth who will take a well deserved rebuke in silence. It generally is "gie me ma bit o' brass and I'll go," and parents are only too

foolish when they encourage such behaviour by taking the lad's part. We live in strange times, my masters. Solomon's rod appears to have been put away for good and all, and the youngest lad who tends birds knows more than his grandfather, and expects more consideration.

[It is not often we allow our pens to convey our thoughts by characters on questions which our very able correspondent on this page weekly ventilates. This week, however, we cannot help ourselves from expressing our sincerest approval of the sentiments conveyed in the last few lines of the above article. The manners of children of the lower classes at the present day are simply outrageous, and nearly the whole blame attaches to the lax ruling of their parents or guardians. The question is not one for the *Journal of Horticulture* to discuss, yet we take this opportunity to support the expressions that have been advanced on the question.—Ed.]

Work on the Home Farm.

We have had more rain and in larger quantity, so the ploughing is now going more satisfactorily. Our Potato-growing neighbours are not so well pleased, for very little more moisture will spoil the hitherto ideal conditions under which the gatherers were working. The pits or pies are growing rapidly, and give the best of evidence that in bulk at least the crops are no common ones. Up-to-Date is quite unapproachable. The British Lion is disappointing as a cropper, although the haulm was so vigorous. The quality is good, but no better than Up-to-Date. We have seen a well shaped specimen of the latter weighing 48½ oz.

Notwithstanding all the reports of townsmen out of work, we are very short of labour in the country. A big shooting party this week requires a large number of beaters, and the men from the farm and woods have to be pressed into service for lack of the usual catch hands. The pay—3s. per day, besides pork pie luncheon and liberal allowance of beer—would attract the men if they were within call, but they are not. There could be no objection to lending the men from the land, but there is more than enough employment for them on the farms, and we suspect the same thing applies to the woodmen. Agriculture will not allow of night work and overtime, which is such a help to the manufacturer. We cannot make our waggoners plough for thirty hours at a stretch, barring meal times; but we hear of engineering apprentices having to work as long. If we had electric light to plough by we could not afford the overtime price, or the overtime limited quantity of work.

The Mustard has been gathered home at last. Perhaps it is owing to the fact that the sowing was a little late; but the anxiety has been wearing, and it may be some time before we try the experiment of a catch crop again. If this one should bring a small fortune, which we doubt, the art of Mustard growing will be zealously studied.

Sheep are well on Turnips, but in one way are getting on too well, i.e., going over the ground too quickly. Swedes may improve, for they are responding well to the rains, and the tops now look clean and healthy. A recurrence of last autumn's mildness is very desirable.

What a splendid tool a good chilled digging plough is! A field that was very foul, having been well worked and surface cleaned, has been ploughed with the digger. The thorough cutting of the subsoil and summer's cutting of the upper soil has resulted in the bringing of the last remnants of the twitch to the surface, where only one harrowing is needed to entirely eradicate them. An old fashioned plough would have left them half buried, and no drag or harrow could then have made such a perfect finish.

THE DAIRY SHOW.—In the large open competition of the British Dairy Farmers' Association, held in the Agricultural Hall, London, last week, the whole of the first prizes for roots were won by the produce of Webbs' seed, viz., first and second prizes, Webbs' Mammoth Long Red Mangold; first prize, Webbs' Smithfield Yellow Globe Mangold; first prize, Webbs' Imperial Swede; and first prize, Collection of Webbs' roots, &c. There were 149 entries for these prizes, and the remarkable success of Messrs. Webbs' seeds must be gratifying to this firm.

FRENCH CROPS.—The approximate return of the yield of Wheat, Wheat-Rye, and Rye in France, which has been compiled from the reports of the Departmental Professors of Agriculture, is published in a recent issue of the "Official Journal." The figures are as follows:—Wheat: Area under cultivation, 6,789,527 hectares; estimated yield, 107,203,036 hectolitres, or 82,744,423 metric quintals. Wheat-Rye: Area under cultivation, 197,387 hectares; yield, 2,384,470 metric quintals. Rye: Area under cultivation, 1,393,818 hectares; yield, 15,957,693 metric quintals. This return shows an increase as compared with last year in Wheat-Rye and a decrease in Rye and Wheat.

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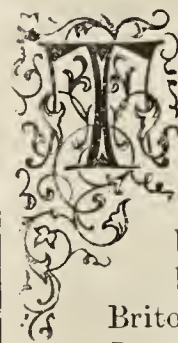
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Journal of Horticulture.

THURSDAY, OCTOBER 24, 1901.

History of the Apple.



THE history of the Apple in Britain is traceable to the earliest period of which we have any written record. We are even fully warranted in

believing that this fruit was known and cultivated by the

Britons before the arrival of the Romans upon our shores, for in the

Welsh, Cornish, Armorican, and Irish languages and dialects, it is denominated the Avall or Aball. The fruit, therefore, had a native name, from which our present name, Apple, is evidently corrupted; and the Hædui, inhabitants of the modern Somersetshire, appear especially to have cultivated this fruit. Their chief town even derived its name from the circumstance of its being surrounded by plantations of the Apple, for it was known as Avallonia (Apple Orchard) when first visited by the Romans. Glastonbury stands upon its ancient site. ("Richard's Chron.," 19.) The cultivation of the Apple was not confined to our south-western districts, for another town named after it, Avallana, was in the north of England, and in the course of the third century we have decisive testimony that the Roman settlers had introduced fresh varieties of this fruit, and that its cultivation had become so extended that large Apple orchards had been made as far north as the Shetland Islands. ("Solinus," cap. xxii.) Traces of ancient orchards are still existing in those high northern localities, and one in the Hebrides, belonging to the Monastery of St. Columb, is described by Dr. Walker as having existed there, probably, from the sixth century. ("Essays," ii. 5.) Others are mentioned by Camden and Leland. It is quite certain that in the Middle Ages the Apple had become one of our staple vegetable products, for

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Hyacinths, in the finest mixture, for bedding or forcing ..	11 0	105 0	Dahlias, Single, in the finest mixture ..	8 4	—
Hyacinths, Single, first size, named, in several leading sorts, red, white, and blue varieties, equal quantities, my selection ..	20 0	—	Anemone, Single, mixed ..	1 4	12 6
Tulips, Single early, in the finest mixture ..	1 10	16 8	Anemone, The Bride, pure white ..	1 8	15 0
Tulips, Double early, very fine mixed ..	2 2	20 0	Anemone apennine (blue Wood Anemone) ..	3 0	25 0
Tulips, Single Duc van Thol, mixed, for forcing ..	2 6	20 0	Anemone apennine (white Wood Anemone) ..	5 0	—
Tulips, Duc van Thol, scarlet-red ..	2 6	20 0	Anemone nemorosa (double White Wood Anemone) ..	6 0	—
Tulips, La Candeur, double white ..	3 4	30 0	Anemone japonica alba, pure white ..	4 0	—
Tulips, Single La Reine, rose-white ..	2 0	18 4	Dielytra spectabilis, red (Bleeding Heart) ..	12 6	—
Sparaxis, very fine, mixed ..	0 8	6 0	Funkias, in the finest mixture ..	10 0	—
Triteleia uniflora, pure white, very fragrant ..	1 6	—	Narcis. Polyanthus, in the finest mixture ..	4 0	38 0
Ixias, in the finest mixture ..	0 6	5 0	Narcis., Double, mixed ..	3 6	30 0
Crocus, first size, in the finest mixture ..	0 10	8 0	Narcis., Single, mixed ..	1 4	12 6
Crocus, second size, in the finest mixture ..	0 5	4 0	Narcis., Trumpet, mixed ..	2 6	20 0
Crocus, yellow, third size ..	0 6	4 2	Narcis., Campanelle, pure yellow ..	1 2	10 0
Spanish Iris, in the finest mixture ..	0 7	5 0	Ranunculus, French, mixed ..	1 0	9 0
Iris Kämpferi (Japan Iris), mixed ..	5 0	40 0	Ranunculus, Persian, mixed ..	1 0	9 0
Iris sibirica, very fine, mixed ..	4 0	40 0	Snowdrops, Elwes, Giant Snowdrop ..	1 6	13 0
Montbretia crocosmæiflora, orange-scarlet ..	1 6	—	Gladiolus, Marie Lemoine, cream ..	2 6	—
Montbretia, very fine, mixed ..	5 0	—	Gladiolus Branchleyensis, scarlet-red ..	2 6	20 0
			Gladiolus Colvillei alba, pure white ..	1 2	10 10
			Azalea ponticum, each, 10d. to 1/8.		

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whenever the chroniclers speak of times of dearth, Apples are almost always mentioned as articles causing distress by their scarcity; and in the Remembrance Office a MS. exists in Henry VII.'s (1485--1509) own handwriting, in which he records that on one occasion Apples were from 1s. to 2s. each, a red one fetching the highest price.

When our agricultural and horticultural literature commences, we find that Fitzherbert, in his "Book of Husbandry," published in 1598, has many, and in most instances, good directions for the culture of the Apple. They are, unlike the works of his contemporaries and immediate successors, the evident results of experience, and not mere translations from the classic Geoponic writers. Thus, on grafting the Apple, he says, "Graft that which is not of an old Apple tree first, for that will bud before the graft got on a young Apple tree late grafted in. For all manner of Apples a Crab tree stock is good, but the Apple tree stock is much better." The varieties of the Apple had now much increased, for Dodoens, writing in 1583, says they were so numerous "that it is not possible, neither necessary, to number all the kinds." Gerarde, writing of this fruit in his "Herball," during 1597, also speaks of the infinite varieties of the Apple, but seems to attribute the variation much "to the soil and climate." "Kent," he goes on to say, "doth abound in Apples of most sorts. But I have seen in the pastures and hedegrows about the grounds of a worshipful gentleman dwelling two miles from Hereford, called Mr. Roger Bodnome, so many trees of all sorts, that the servants for the most part drink no other drink but that which is made of the Apples. The quantity is such that the parson hath for tithe many hogsheads of cider. The hogs are fed with the fallings, which are so many that they will not taste of any but the best." Though the varieties were so numerous, Gerarde gives drawings of but six, which we may presume were the most in favour, and were the Pome-water, Baker's-ditch, King Apple, Queening or Queen Apple, Summer Pearmain, and Winter Pearmain. Heresbach, who wrote a little earlier (1570) says the "cheefe in price" were the Pippin, the Romet, the Pome-royal, and the Marligold. Sir T. Hammer, writing about the year 1660, says the principal Apples were "Summer Pepin, Holland Pepin, Russet Pepin, Kentish Pepin, the best supposed in England, Russeting, Gilliflower, Muscadine Queen, John Apple, King Apple, Golden Reinette, the Royal, Hollow-crowned, and Common Pearmain, Old Wife, Nonesuch, Figg Apple; all these are sold at 8d. the tree, except the Figg Apple, which is 5s."

We quite agree with Mr. Knight, Dr. Martyn, and other vegetable physiologists, in thinking that no kind of Apple now cultivated appears to have existed more than two or three hundred years; and this term does not at all exceed the duration of a healthy tree, or of an orchard when grafted on Crab stocks, and planted in a strong, tenacious soil. From the description Parkinson, who wrote in 1629, has given of the Apples cultivated in his time, it is evident that those now known by the same names are different, and probably now varieties; and though many of those mentioned by Evelyn, who wrote between thirty and forty years later, still remain, they appear no longer to deserve the attention of the planter. The Moil, and its successful rival the Red-streak, with the Musts and Golden Pippin, are in the last stage of decay, and the Stire and Foxwhelp are hastening rapidly after them.—("Knight on the Apple," 6.)

Except by some overwhelming convulsion—such as the Deluge—we believe that no species ever becomes extinct, but it is quite otherwise with varieties and hybrids. These, like all other devices of man, have their limited period of existence, which by no human ingenuity can be protracted. Some authorities assert that grafting is a mode of thus protracting vegetable life, but from these we totally differ. It is, happily, quite true that grafting upon a young and vigorous stock imparts to the scion a supply of sap of which the parent stem is incapable, yet this failure is only premonitory of the departure of power which will, after a transient increase of strength, occur to its removed member. Every subsequent scion, however frequently, and whilst in apparent health, removed to another youthful stock, will be found to have a period of renewed vigour and productiveness of shorter duration than its predecessor. The Golden Pippin is occasionally quoted as a contrary proof, but this example has no such weight; for, supposing that this fruit yet exists, still it has not passed the age beyond which the period of unproductiveness and death in the Apple tree may

be delayed by grafting, for we have no mention of this fruit that at all justifies the conclusion that the Golden Pippin existed much more than three centuries ago. A Pearmain Apple is mentioned in records as old as King John (1205), but the Pippin is not noticed by any authority earlier than the reign of Henry VIII. (1509).

The Falling of Leaves.

October may be said to mark the end of the "phenological year," and the time has come when Nature curls within herself, to coin a phrase, and remains outwardly quiescent for some months. The dying, drooping, and dropping of many of the vegetative organisms around us is an outward symbol of this truth; the whole of it is only understood by the botanist and Nature-student. Take the case of the beautiful leaves of deciduous trees, which are now falling thickly. Throughout the warm summer the leaves have been briskly active in building up structure and in accumulating supplies of reserve matter. The condition of the elements was favourable to increase and internal transmutations. But by-and-by the days became heavier, duller and colder. The longest day had gone, and each one now was shorter. The expenditure account which all Nature maintains along with the income register began to gain upon the latter. The decrease of sunlight and warmth lessens the whole energy of the tree; the drying-up process, if I may so term it, carried on by the oxygen as it passes in and out through the pores (stomata) of the leaf, causes such changes in the chemical constituents of the latter that the work which was previously carried on is now no longer possible. The semblance of the life of a leaf and the life of man correspond very closely, and is well proven in the weird old song beginning, "What's the life of man more than a leaf?"

The fall of the leaf implies that the internal constituents are not in a condition to survive the winter. The leaves of "evergreens," on the other hand, are not shed, for within them there is a certain amount of gummy and resinous matter which saves them in a measure, and they are adapted for formulating their internal matters so as to survive the winter vicissitudes. Just before the autumn ripening of the leaves the "food" stored in them—the leaf-albumen and carbohydrates—is withdrawn. Nature is curling within herself. Were these matters which are contracted from the leaf to be lost to the tree, the effect would prove itself by a more or less decrepit growth in the springtime. Even much of the chlorophyll, i.e., the granules that give leaves their green colour, is withdrawn before the fall of the leaf. The green granules disappear, and are stored in the twigs and branches, but they leave smaller and nearly yellow coloured granules still in the cells of the leaf. Anthocyanin is another substance left behind, and this, in combination with the yellow granules, produces the yellow, orange, red, and other similar colours which we see in the "autumn tints." What is left ultimately in the worn-out leaf structure is inert mineral matter, with a minimum of organic constituents. Calcium oxalate is among the chief of these mineral combinations, and this, with the other like substances, are brought to earth with the fall of the leaf, and there they are of the utmost value in furnishing fresh sustenance to the roots.

The casting of the leaves is no real loss to the tree. Indeed, it is a gain. All that is useless is thus taken away from the tree, leaving the branches free to be washed and cleansed by the rains and snows of winter; and the young leaves in springtime have every freedom for their development. Just before the actual separation of the leaves from the tree, a divisional layer of young cells grows between the stalk and its point of union with the twig. These cells are weak, and so it happens that by the shaking backwards and forwards, and up and down by the wind, the new cells snap from their insecure grip with the older cells, and down the leaf comes. After frost, this fact is made clearer, and may be accounted for by saying that the new cells become ruptured, and then collapse with the thaw which follows. After the separation, a layer of cork tissue forms over the wound.

Trees have a systematic order in the shedding of their leaves; but the order of shedding is not dependent upon the order of leafing. Ash and Beech trees begin to shed their leaves at the top, while Poplars and Willows cast theirs from below upwards. Limes, Acers, and Planes are observed to shed their leaves pretty evenly. Trees in tropical forests only shed their branches or leaves when the dry season is prolonged and severe. It is rather a significant fact that the evergreen trees of Arctic regions, where frost and snowstorms are frequent, have generally needle-like leaves, viz., Pines, &c. Had they broad foliage, like the deciduous trees, the result would be that they would break down under the loads they would sometimes have to carry.—J. H. D.

**Trichopilia suavis.**

The genus *Trichopilia* comprises very few species, and the one illustrated on this page is the best known, and oftenest to be found in a flourishing state of health. All of the species are dwarf in habit, the majority producing gaily coloured flowers. The pseudo-bulbs are compressed, and bear a single leaf on the top. Peat and sphagnum in about equal parts form the soil they thrive in. The flowers of *T. suavis* are large, the sepals and petals being narrow, about 2 inches long, and are nearly straight. The lip is large, three-lobed, the side lobes folded over the column and forming a tube 2 inches across, crisped, and wavy at the tip. The lip is white, spotted and blotched with crimson, and stained at the base with orange; petals and sepals white. In Costa Rica it grows on Oak and other trees at an elevation varying from 5000 to 9000 ft. It was introduced over fifty years ago.

The Week's Cultural Notes.

The present is a capital time for a thorough overhauling of the Cattleya house. Most of the repotting will be finished, and the majority of the plants will have finished their growth, and all that is wanted to prepare them for passing the winter safely is a good cleaning and re-arrangement. One of the greatest pests to the grower of Cattleyas is the white soft scale that often infests otherwise healthy plants. It is difficult to kill entirely, and of so fecund a nature that unless the work of cleaning is thoroughly done the plants are soon as bad as ever.

It has a liking for the scaly parts of the rhizomes, the sheathing bases of the leaves, and other parts where it can lie unobserved, and where a very little of the water reaches it. All these parts, then, must come in for special attention, using a small pointed stick to those places where the sponge will not reach, but carefully avoiding puncture or abrasion of the foliage. Soft water, with a lump of softsoap as large as a pigeon's egg to a pailful, is as good an insecticide as any, and for this special purpose better than many.

The entire plant, exclusive of the roots, should be dipped in the mixture and laid on its side to drip a little, this preventing the soapy water from entering the compost. Keep plenty of water on the sponge and go over the plant gently, hard rubbing being injurious. When all the insects have been removed give a thorough syringing with tepid water, and re-arrange the plants, the stages and pots having meanwhile been cleaned. A light fumigation may be given on two successive evenings with XL-All or other good fumigator.

The present mild weather is all in favour of Orchids, but directly there are signs of a change to colder nights the Masdevallias of the Chimæra section should be taken from the coolest house, and suspended near the glass in the intermediate house. Other species that like this slightly higher winter temperature are *Odontoglossums* of the grande and similar sections, *Sophronitis grandiflora* and *S. cernua*, *Trichosma suavis*, *Pilumna fragrans*, and several of the *Miltonias* and *Maxillarias*. See that all are clean before they are placed among heat-loving species, the *Miltonias* and *Masdevallias* being especially liable to insect attacks.—H. R. R.

Evergreen Trees and Shrubs.

Judging from the small number of evergreen species of trees and shrubs used to any great extent for decorative work, the large number suitable for the purpose cannot be any too well known. The commonest subjects seen are the Laurel, Box, Aucuba, and Holly-leaved Berberis, but even of these ubiquitous plants there are good forms and varieties that are rarely seen. In the midst of the planting season it may not be out of place to bring before readers of the Journal a number of these neglected plants, many of which combine with their value as evergreens the virtue of being excellent flowering subjects. With the exception of peat-loving plants, which will be mentioned separately, all will grow in any good garden soil, and require no more attention than things usually met with.

The Bamboos alone furnish a goodly number of excellent

subjects, and providing they are sheltered from cold winds are valuable alike for isolated specimens, groups in the shrubbery, or for forming a separate garden. In whichever way they are used they form a distinct feature, their wand-like shoots making a striking contrast to anything else in the garden. Given good soil, plenty of water in summer, and protection from cold winds, their emerald-green leaves retain their healthy appearance until new growth commences in April. There are upwards of forty species to select from, varying in habit from the tall upright growing *Arundinaria Simoni* and *Phyllostachys mitis*, to the dense clusters of arching shoots of *P. viridiglaucescens*, *nigra*, *flexuosa*, *Arundinaria nitida*, &c., and from the distinct spreading habit of *A. anceps* to the dense masses of thin shoots formed by *Bambusa palmata* and *tesselata*, the two largest leaved of the group, and again to the dwarf carpet-like masses of *Bambusa pygmaea*, *Arundinaria pumila*, &c., each and all possessing its own style of beauty, which is enhanced by contrast with its neighbour.

The Chilean *Azara microphylla* forms a pretty and graceful plant, its elegant shoots clothed with small deep green leaves being very effective. When young a little protection during severe frost is necessary; later in life it is hardy. It may be grown upwards of 15 feet in height. Other species of the same genus are *A. dentata* and *integrifolia*. Several species of *Berberis* combine the qualities

of evergreen and good flowering plants. The most noticeable are *B. aquifolium*, *buxifolia*, *Darwini*, *Fortunei*, *stenophylla*, and *nepalensis*. *Buxus sempervirens* is often seen in gardens, but not so many of its varieties. Of these *argentea*, *aurea maculata*, *elegantissima*, *latifolia*, *longifolia*, *myosotifolia*, *myrtifolia*, and *pendula* are worthy representatives. In addition, the large-leaved Himalayan *B. Wallichiana* and *B. balearica* from the Balearic Islands are useful and distinct.

The Ivy furnishes a great number of varieties, differing greatly in habit. The tree forms, whether green or variegated, make good groups, while the trailing forms are handsome alike on walls, on poles, or covering large tree roots. The Holly is represented by a large and varied number of forms of *Ilex aquifolium*, and also by such distinct species as *I. cornuta*, *crenata*, *Dahoon*, and *latifolia*. *Ligustrum coriaceum*, *japonicum*, and *lucidum* are worthy a place, while such things as the fruiting forms of *Aucuba*, *Garrya elliptica*, the "Rock Roses," *Magnolia grandiflora*, *Skimmias*, *Rhamnus alaternus*, *Empetrum nigrum*, several *Genistas*, *Cassia fulvida*, species of *Lonicera*, and Evergreen Oaks may be utilised.—W. DALLIMORE.



TRICHOPILIA SUAVIS.



Summer Pruning of Fruit Trees.

The recent notes from Miss Baker on the benefits of summer pruning—or pinching rather, of fruit trees, draws forth a letter from Mr. Alex. Traill, The Gardens, Falshaw Hall, Wilmslow, Cheshire. Mr. Traill sent a bunch of remarkably stout shoots or “spurs,” well set with plump buds and likely to ripen thoroughly, as material proof that there are benefits in timely pinching. Well, certainly, and we hope every gardener fully appreciates the worth of judicious pinching. Mr. Traill will be sorry to learn that the Pears he sent, splendid samples though they had been, were entirely decomposed when they reached London.

Cucumber Disease.

Before the Scientific Committee of the Royal Horticultural Society on Tuesday, October 15th, Mr. Houston described a disease which is doing much injury in parts of England, one grower alone having lost £1000 worth of fruit. It appears on the plants twelve weeks after sowing the seed. The fungus is *Cercospora melonis*, M.C.C., described by Dr. Cooke in the “Gardeners’ Chronicle” for September 5, 1896, page 271. It begins with a few spots on the leaves, spreading till there is no healthy leaf left. As the spores are multiseptate and each joint can propagate the fungus, the disease is easily communicated to other plants. There is no remedy except complete destruction. Cucumbers or Melons should not be grown in the same pits for some seasons in which diseased plants have been.

Cucumbers.

Sweetened horse droppings sprinkled on the beds occasionally, and on the minure a little soot, act as a gentle excitant to the roots, supply nourishment to the soil, and ammonia to the atmosphere. Spare no effort to keep the foliage clean and healthy, and do not permit accumulations of dirt on the glass. Allow the winter fruited to extend well up the trellis before stopping them; train the shoots right and left at about 1ft distance apart, crowding being fatal to well developed foliage, and the sturdier the plants are grown the better for them. Earth the roots as they protrude from the hillocks or ridges; supply water as required, not less in temperature than that of the bed, being careful not to overwater or allow the plants to lack needful supplies of that element, and liquid manure or surface dressings of fertilisers washed in. Maintain a night temperature of 65 to 70 degrees in mild weather, 60 to 65 degrees when the nights are cold, 70 to 75 degrees by day, advancing to 80 degrees, 85 degrees, or 90 degrees with sun heat. Admit a little air at the top of the house whenever the weather is favourable, but avoid cold currents; indeed it must be done without lowering the temperature or drying the air too much.—G.

“Air Plants.”

At the latest meeting of the Scientific Committee “Air Plants” were shown. Dr. Plowright sent a portion of a species of *Tillandsia*, called the Cape Air Plant, but a native of tropical America. He writes as follows:—“On the 12th August this specimen of *Tillandsia*, the so-called Air Plant of Cape Colony, was received from Cape Town. To it was attached a piece of string by which it had been suspended in the cabin of the gentleman who brought it over. It was hung up inside a south window in my house in King’s Lynn, and in due course flowered. There was no trace of flower bud when it arrived, but about a fortnight back a dark blue corolla appeared, springing from what appeared to be a pink calyx. Those xerophilous plants are always interesting, and as a companion to the above a stem of *Sedum speciosum* was suspended in the same window on the same date. The changes were carefully watched, and consisted, first in the turning upward of the flower bud, followed by the turning back of the leaves on the stem, so that they pointed upwards. The lowermost leaves—i.e., those nearest the root, began to wither, whilst those nearest the flower remained quite fresh. At this time the base of the stem threw out numerous roots. The flower was fully expanded by the 1st of October, and most of the leaves, as well as the roots, was shrivelled.”

Chrysanthemum Harmony.

In this we have another real good, early flowering variety, with somewhat broad florets of a brownish buff tinted lilac colour. The habit of growth is of the right sort, being vigorous and free in flowering as well.—E. M.

Chrysanthemum Godfrey's Pet.

This is one of the finest of yellow flowering early *Chrysanthemums* we have. The habit is stiff and sturdy, the plants growing but 2ft high, and flowering most profusely in September. In colour the flowers are a rich yellow, quite of the Sunflower hue, the florets narrow, and with just a twist reminding one of *Agréments de la Nature* of many years ago. I look upon this new-comer as a real acquisition.—E. M.

Ocean “Flora.”

The sea has flowers as the land has, but the most brilliant of the sea flowers bloom not upon plants but upon animals. The living corals of tropical seas present a display of floral beauty which in richness and vividness of colour and variety and grace of form rivals the splendour of garden flowers. The resemblance to vegetal blossoms is so complete that some persons find it difficult to believe that the brilliant display contains no element of plant life, but is wholly animal in its organisation. Among the sea animals which bloom as if they were plants are included, besides corals, the Sea Anemone and the Sea Cucumber.

Ripe Grapes.

A temperature of about 50 degrees is most suitable for these, Muscat of Alexandria being better if 5 degrees more. No opportunity should be lost in giving air when the days are fine, turning on the heat in the morning so as to cause a genial warmth in the pipes, and so expel damp, turning off the heat at midday, or soon after, so as to allow the pipes to cool and the minimum temperature to be reached by nightfall, 50 degrees being suitable for Muscats and 5 degrees less for other varieties. In dull weather it will be necessary to keep a gentle warmth in the pipes, and the ventilators closed, in order to keep the Grapes from damp, moisture being prevented settling on the berries.—A.

Ampelopsis for Windows.

The following notes from Mr. W. Gardiner refer to the arrangement of the window garden, figured in last week’s issue. He says:—“I have just received this morning a further note from Mr. G. Randall anent his *Ampelopsis Veitchii*. The *Ampelopsis* is grown from the top of the bay-window, around the porch, and not from Mother Earth. A few years ago it completely covered the front, but the boxes got so full of roots they largely died away. I cut them down, pruned the roots, and gave fresh soil in 1899. They have grown well since, as our photograph shows. I made no special effort to gain the prize, but have always had a good show. About ten years ago I was awarded a prize by ‘Gardening Illustrated,’ and it gave a pictorial engraving in one of the issues.”

Solanum æthiopicum.

The number of species of *Solanum* cultivated in gardens for the sake of their ornamental fruit is very limited, the two best known, perhaps, being *S. capsicastrum*, the Winter Cherry, and *S. melongena*, the Egg Plant. In addition to these two plants, however, there are quite a large number which are extremely ornamental, are easily grown, and last in good condition for a considerable time. A number of specimens of the plant under notice are to be seen in the Temperate House at Kew, where, with such other species as *Worsleyi*, *macrocarpum*, *ferox*, and others, they make a nice effect.

It is an annual from Ethiopia, and makes, with a little stopping when young, a nice bush 1½ft high. The leaves are large, rough to the touch, and very similar in shape to those of the Egg Plant. The flowers are whitish, and borne during July and August. These are followed by numerous roundish, deeply furrowed, Tomato-like fruits an inch or more across, which, when ripe, early in September, are scarlet in colour. After the fruits are thoroughly ripe they hang on the plants from six to eight weeks. Seeds should be sown in heat in March, and the young plants grown on quickly indoors until the end of May, when they should be stood out of doors, remaining there until the fruit is set. Good, rich, loamy soil is required, and liberal feeding is necessary when the plants are well rooted.—W. D.

Plants Worthy of Improvement.*

It seems peculiarly appropriate that we should consider the best, most useful and beautiful of our wild or native plants on the day of days that is sanctified by the very name St. George of England. The fact, however well known, cannot be too much emphasised, that some at least of our very best fruits, vegetables, and flowers are garden or cultivated developments of wild plants found in our woods and meadows, or along the seashore. It has been said that "charity begins at home," but the English people have never been quite satisfied with that proverb, and whilst often utilising to some extent the best of home productions, they have ever had a strong weakness for acquiring the best productions of other countries as well. Old Thomas Fuller told us that in 1600 we imported Cherries, Apples, and other fruits from the Continent, and "hardly had a mess of rath-ripe Peas except from Holland, which," he drily adds, "were dainties for ladies—they came so far and cost so dear."

Even as late as 1776, when Adam Smith wrote his "Wealth of Nations," he took some trouble to point out what then was true, viz., that gardening was practised as an amusement by so many well-to-do people that market gardeners could make but small profits, since the rich "supplied themselves with all the most precious products of the garden." Nowadays we have changed all arguments under these heads, and many—even if not most—of our farm and garden products are brought to us "from afar," as Fuller has it, and they cost us actually less in our markets than the products grown at home. Adam Smith's argument has lost its force, since the increase of population and of industrial and commercial prosperity has created demands never even dreamed of a century or even half a century ago.

Thanks to cold storage, quick transit, and cheap freights, fruit and vegetables, and even flowers, are welcomed and profitably brought to our shores from abroad, often at times when our own supplies are consumed or out of season, and still the finest produce of our own gardens also realises good prices when at its best. We have free trade in everything almost except in land, and our land laws and customs need revising quite as much in England as in Ireland and elsewhere. Cheap and simple means of purchase or security of tenure are especially essential. With land in the hands of people who are able to make the best of it, we should have more good and pure food, and more healthy men and women to the acre: there might be less game, but Sir William Crookes' scarcity of Wheat alarm need not frighten us, nor threatened invasion. We must educate the children who are born in and like the country to stay there, and do our best to win back some at least of the habits of old English thrift and housewifery.

Wild Flowers.

"Woods and groves are of thy dressing,
Hill and dale doth boast thy blessing.—MILTON.

"Take all care of the beautiful," said the old Greeks, "because the good and the useful will care for themselves," so we cannot say or do too much in praise of, or in the care and protection of, our most beautiful wild flowers. We scour the forests, jungles and mountains, the pampas and the prairies of the whole world for garden or hothouse plants and flowers, or for vegetable products used in the arts or precious for "the healing of the nations," but we in a great measure neglect and undervalue the wild flowers and the field and forest products of our own land. All the savans, the great travellers male and female, Alfred Russel Wallace, or Miss Marianne North, tell us that no flowers on earth can rival the fresh spring flush, the summer lushness and sweetness, or the rich and ever-varying autumn colouration of our native vegetation. Linnaeus is said to have dropped on his knees in reverence at the golden Gorse or Furze as it first flashed on his eyes in England, and I shall never forget the ecstatic delight of a Swiss botanist as he first saw a wood of English blue Hyacinths in Sussex, with wild rabbits hopping about amongst them! Ruskin tells us he never really felt the full force of what the words "purple and gold" meant to mortal eyes until he saw a field of purple-flowered Clover, with a golden river of Marsh Buttercups running through its midst.

The tropics are monotonous in their beauty, and for flowers that really colour and perfume the landscape for miles and miles we must look at home. Go where we may, there is nothing finer than Gorse and Broom, Honeysuckle and Hawthorn, followed by Brambles, Crabs, and wild Roses, and the purple Heather that paints whole mountain sides with pure colour, and yields us honey and perfume at the same time. Our woods are sheltered arboreta, and are jewelled with Anemone, Hyacinth, Foxglove, Lily of the Valley, and a host of other flowers, from the time the catkins of Goat-willow and Hazel or Birch appear, until the Brake Fern turns brown umber and golden, and the leafy canopy of Beech and Chestnut and Oak take on the livery of the dying year. We all know the flash of pure gold that comes from Marsh Buttercups in the green water meadows, the pink Cuckoo-flower

or Lady-smocks "all silver white," Ox-eyed Daisies, Clover and fairy-like Grasses and Sedges of many kinds. Every hedge in England is a summer tangle of Traveller's Joy, wild Roses and Honeysuckle, every river bank and brook side or marsh is enriched with Lythrum and Willow-herbs, or with golden Flag Iris, and ostrich feathery plumes of Meadow-sweet. What aquatic gardens there are along the river reaches or on the Norfolk Broads, the Reed jungles, or Willow holts fringed with Water Lilies all afloat, with Water Buttercups, white and lacy-looking as a bridal veil. Everywhere in wild England to-day the sweet Violet, the pale Primrose, the sweet Woodruff, and wood Wind-flower make copse, wood, and hedgerow alike radiant and fragrant with vernal beauty. In the daisied meads the cinque-spotted Cowslip hangs its soft sweet head, and the Daffodils or Lenten Lilies of England blow their golden trumpets as if to summon the swallow and nightingale to the climate Browning could not forget even when he was in sunny Italy.

Amongst the best of all our native wild flowers that have already been to some extent cultivated and improved we may name the wild Roses, such as the Sweetbriar, and the Scotch and Ayrshire Roses. There is now a revival of Rose growing and the rearing of seedlings in England, and the late Lord Penzance's new race of cross-bred Sweet-briars may be taken as an object-lesson of the best. We have had no such distinct improvement in native or home-reared Roses since the Scotch Briars (*R. spinosissima*) and the climbing Ayrshire Roses (*R. arvensis*) were reared nearly a century ago. We should like to see the results of hybridising *R. arvensis* or *R. rubiginosa* with the single-flowered *R. sulphurea*, a wild Persian kind, or of the Burnett Rose (*R. spinosissima*) crossed with the dwarf and precocious blooming *R. multiflora*. But potentialities are legion when we consider the Roses, and we may hope for actualities as well. Violets, field Poppy (Shirley), Foxglove, Lily of the Valley, Aquilegia, Pinks and Carnations, Crocus, Snowdrop, Narcissus or Daffodil, Hawthorn, the Daisy, Viola tricolor or Pansy, Primrose, and the Wallflower and Stock and wild Rocket have also been improved, though much more is possible and remains to be done.

We have in our meadows and Corn or Turnip fields two wild Chrysanthemums far finer than the wild species of China, Korea or Japan, from which the garden Chrysanthemums have been obtained. *C. leucanthemum* (white or ox-eye) and *C. segetum* (Corn Marigold) are both worth selection and cultural improvement. No window plant, if we except, perhaps, the common Musk, is so popular as is our native Moneywort or "Creeping Jenny," of which millions must be grown in pots and window-boxes in and around London alone. The evergreen Killarney Saxifrage, or St. Patrick's Cabbage (*S. umbrosum*), is naturalised abundantly in London gardens under the name of "London Pride." Nothing on earth, not even from the tropics, can be more fresh and beautiful than many of our native or wild Ferns, both evergreen and deciduous, and it is pleasant to know that they are now more popular than ever and more largely grown, while their names are being amended and the whole group better classified.

Wild Fruits.

Very few areas as small as are the British Islands are so rich in wild fruits, flowering shrubs, and timber trees. English Oak made England a nation centuries ago, and even the acorns were formerly almost more valuable as "pannage" for swine feeding than the land on which they grew. Had not "Bluff King Hal" fostered and patronised the importation of Continental fruit trees into Kent, our British and Irish gardeners might have made even more than they did of our own Apples or Crabs, Pears, Plums, Bullaces and Sloes two sorts of Cherries, sweet and bitter fruited; Raspberries, Strawberries, Gooseberries, Currants, Red White, and Black; Cranberries and other ericaceous fruits, Hazel Nuts, and lastly, but perhaps quite as important as any, the Blackberry, tons of which are gathered every season by cottagers' and labourers' children in the country districts and sold at a profit in all our manufacturing towns. Blackberries, Mushrooms, and in some districts wild Bullaces and Sloes, and Watercress form the wild harvest or "jungle produce" for bright eyes and lissom fingers nearly all over the country, and but little, if any, harm is done in the gathering. Minor products are Elderberries, Medlars, Crabs, and wild Pears, springtops or autumnal trails of wild Hops, coral-berried wreaths of Tamus or Black Briony, our only British Yam. The silvery fruits of Clematis, or "Old Man's Beard," are also largely gathered and used for decorative purposes; so also are the red-fruited Water Elder (*Viburnum Opulus*), Mountain Ash, and Berberis berries for jellies, candying, or pickling, as garniture for venison and other dishes. The jelly made from the Rowan tree or Mountain Ash is indeed the thing for a haunch of venison, especially in the North, where both deer and Rowan tree thrive so well.

The little jet black Crowberries, formerly esteemed of gourmands, and now beloved by the grouse on many a mountain side, are not much utilised to-day, but the wild Cranberry and the Irish "Fraughans" (*Vaccinium Myrtillus*) are gathered in quantities wherever they are plentiful, and used in tarts or puddings. Even hips and haws have been used in rustic cookery, and old Gerarde, in his celebrated Herbal (p. 1,089), mentions preserved

* An essay published in the Journal of the Royal Horticultural Society, from the pen of F. W. Burbidge, M.A., F.L.S.

Sweetbriar fruits as being excellent, "making pleasant meates and banketting dishes as tartes, and such like, the making whereof I commit to the cunning cooke and the teeth to eat them in the rich man's mouth." Of all our native or wild fruits the one worth earnest attention, culture, and improvement, is the common Blackberry or Bramble. In the United States the culture of the Blackberry as a market fruit is very extensive, and the economic results most important; but as a rule the best of the American kinds thrive but badly or intermittently in our own gardens. We may do much better by selecting, cultivating, and improving from seed our native kinds. Every stretch of Blackberry country, every hedge, in fact, contains varieties of widely varying merit, and we must select the best flavoured, the largest-fruited and most prolific kinds. It is a fruit that may be grown on rocky slopes or stony and poor ground quite unfit for most other uses. Selected wild varieties, and the cut-leaved variety (*Rubus fruticosus* var. *laciniatus*) are decidedly the best to start with, but by selection and cross-breeding under cultivation even finer, larger, and more fertile varieties would, and could be obtained. The wild Bullace Plums, so popular in Norfolk and the Eastern counties, might also be much improved even under hedgerow culture.

Some may ask me, "Why go to the trouble of cultivating that which already grows abundantly wild?" Well, in the first place, we are rarely or never satisfied, especially by things that cost us little or nothing, and then there is that deep laid desire in every British heart to go "one better," in a word, to improve and ennoble whatever is taken in hand. Besides, there is in the British Isles to-day a gigantic army of gardeners, amateur and professional, and if every one of these is to have a hobby horse to ride, as every good and true gardener should have, well, then there is some chance for the selection, culture, and improvement of all the best of our native plants. No one cultivator can take up or grow everything, but everyone may select or take up something and make it more beautiful or more useful for certain places or purposes than it was before. Hybrids have already been obtained between the Blackberry and the Raspberry, and attempts are in progress to ensure a happy marriage between the Japan Wineberry (*Rubus phoenicolasius*) and the best of our native Blackberries and Raspberries. Even without actual garden cultivation much may be done by merely fostering the best of wild flowers, fruits, and vegetables in suitable places where they naturally grow.

(To be continued.)

Fine Celosias.

It is not an everyday experience to find Celosias so finely grown as those now to be seen at the present time in the Longford Castle gardens, Salisbury, though I believe in this instance even the plants scarcely compare with those of some previous years. Be that as it may, those under notice are striking, because of their stature and vigorous condition. Some idea may be formed of their floral state when it is said they attain to a height of about 5ft, and spread in bush form to nearly 4ft. Their flowering pots are 8in in diameter, which cannot be said to be large for such fine plants. Gardeners accustomed to see them in 6in pots cannot refrain from exclaiming in suitable language, and they at once demand their unstinted admiration, if not envy, the latter being, in my opinion, a pardonable offence.

Being naturally struck with their unusual proportions, I inquired a little into their history, and find they were given comfortable quarters on shelves in the Melon houses until they had advanced somewhat in stature, then transferred to a large and lofty lean-to Fig house, the roof of which is not yet fully occupied. The seeds were sown in March, the resultant plants given periodical pottings until they had reached the final 8in size. Watering must have been carefully attended to, syringing assiduously practised (for Celosias are well known "spidery subjects"), and the soil substantial and good, to have carried in its train such satisfactory "dividends," and Mr. Hazelton and his assistants are to be congratulated on the success which has attended their efforts.

I am not prepared to say these are of record size, but they certainly eclipse every example of Celosia culture that has come under my observation previously, and I should be satisfied, as, no doubt, would many other readers of the Journal, if this instance of success could be so successfully imitated. The strain is one of Mr. Hazelton's own selection, extending over a series of years, some of the plumes having a crested extremity, others are of the usual feathery type. They are distinctly pyramidal in growth, and the colours varied and refined.—W. S.

Outdoor Peaches and Nectarines.

These have given one more proof of their adaptability to the English climate, for crops have been both abundant and fine. Our trees of Hale's Early, Violette Hâtive, Crimson Galande, Alexander, Dymond, Bellegarde, Barrington, and Sea Eagle have given a good supply of well-coloured and full-flavoured fruits. At Heywood, near Westbury, Mr. Robinson is very successful with outdoor Peaches; his trees cover a lofty 50yd wall, and their health and productiveness is really marvellous, especially when it is remembered that, no matter what the summer weather may be, root moisture is derived from rain, and never augmented from the water pot, except for the daily syringe in the hottest weather. Bellegarde, Dymond, Sea Eagle, Barrington, Princess of Wales, Walburton Admirable, and Condor, are some that have not failed to bear their burden now for a good many years.

Nectarines are not so satisfactory as Peaches, by reason of the partiality of insects of various kinds for them, and which are eaten and spoilt while yet in a hard and green state. Woodlice, earwigs, wasps, and bluebottle flies are a constant source of terror to these fruits, or, rather, to those who have the charge of them. It is worthy of remark that with the late sorts just named the season of ripe fruit has closed early, due, no doubt, to the continuous summer-like weather. Sea Eagle and Princess of Wales were ripe in the middle of September, and Walburton's were gathered by the end of the month. In a cool house on an eastern aspect we have gathered late Peaches and Nectarines until past the middle of October in some seasons. This year the last fruit will have been plucked by the 5th of the month. They are invariably later in this house than on the open walls, ventilators at no time, except when frost threatens in the spring, are ever closed.—R. A.

Scorpion Flies and other Insects.

In view of the great destruction of life that is ever going on in the insect world, it has been suggested that the phrase of "dying a natural death" can have hardly any meaning there. So many insects have their lives cut short by quadrupeds, birds, reptiles, fishes, and by their own brethren, besides what they are liable to from the hand of man and atmospheric influences, that to die thus suddenly seems the more natural mode, and death by decay or old age rather out of the usual order of things. We know that it is almost impossible to find a dead donkey, and though this cannot be said of insects, the number of bodies one sees about of creatures belonging to this race is comparatively small; for those that are suddenly killed are often as suddenly eaten up, even to the fragments. And in the case of the few insects that die peaceably, their friends have never any occasion to resort to cremation, as mites and other small creatures are generally at hand to reduce the carcase to a mere shell. Some birds also, as is well known, though they will not usually eat dead insects, hunt up beetle elytra and moth wings to interweave with their nests.

The Scorpion Flies, however, frequent visitants to the garden during the summer season, prey upon living insects in their imago state; the larvæ, about which not much is known at present, are conjectured to feed upon the roots of plants. That they live under the earth is certain. Whether they are strictly vegetarian may be questioned, since it is quite possible that, like the flies into which they develop, they may not withstand the temptation to devour anything alive that they come across in their subterranean rambles, and which it is in their power to master. A glance at these insects, as they dart about amongst the leaves in the sunshine, at once suggests to the looker-on their affinity to the Dragon Flies, though they are not so agile nor so fiercely carnivorous as their relatives. But I have no doubt a Scorpion Fly can put away in a day a fair number of small insects. As two or three species are reported to feed upon those leaf-rolling caterpillars which the gardener finds it so difficult to deal with, we have reason to be obliged to them. I have myself frequently seen them on bushes which were swarming with caterpillars, but could not detect them in the act of tearing these from their abode—an act, nevertheless, which it is most probable they perform, and for which the long head with its powerful jaws and the spined feet are particularly fitted.

History carries back the name of Scorpion Fly to the days of Aristotle, who fancied these insects were winged scorpions of diminutive size, though in the mind of some a doubt may arise as to the identity; for, of course, Aristotle did not leave us a figure

of the Scorpion Fly he knew. The joints of the abdomen suggest a comparison between the two. Other observers have seen a resemblance between the shape of the head (in one species, at least) and that of the horse. We miss the brilliancy and lustrous beauty of the eyes so observable in the Dragon Flies; but yet those organs are keen enough in the Scorpion Fly tribe. The wings are gauzy, as in the Dragon Flies, and spotted with shades of grey and brown, while the forceps at the tail of the male fly indicates another resemblance; this is said to have strength to pierce the human skin, but I incline to doubt this. The females, unlike the Dragon Flies, have an ovipositor or egg-placer, rendered necessary by the mode in which the eggs are deposited, otherwise they are equipped as are their partners, and they subsist in the same manner. The legs of these insects, to which allusion has already been made, are well worth looking at under a moderate magnifying power, as they are surrounded with finely cut spines arranged in rings, while the "knee joints" are fringed and spurred, and the extremity of the foot bears toothed claws, which have been compared to those with which some spiders are furnished. The Panorpidæ fall into that division of the Neuroptera where the pupastate is inactive, and they are nearly allied to the Heterobii, or Lace-wing Flies, the notorious foes of the aphids. We have five British species, the most familiar of which is *P. communis*, supposed to be partial to places that are damp or low, in preference to elevated lands. This may be connected with the habits of the larva. There may be more than one brood of these flies in the year; if so, the winter would be passed in the egg state, the eggs first laid in the summer producing larvæ that grow rapidly, and develop into flies ere the weather has begun to get cool, leaving behind them eggs for the next season. The larvæ of the Scorpion Flies are cylindrical in shape, studded with tubercles, and with short fore-legs; the head, somewhat flattened, facilitates the burrowing operations that are essential in their mode of life. Having reached maturity, each one scoops out for itself a cell, and there becomes a singularly squat pupa, exhibiting not much resemblance to the perfect insect that is to appear from it. It should be noticed that if one of these flies is laid hold of, it executes such contortions that some persons are alarmed and speedily let it go. *Boreus hyemalis* is a rather scarce insect with us, and one of the few that come forth in the winter. Though the legs are long, the form of the head shows its connection with the Panorpidæ; and on the back the wings are gathered into a kind of bunch, which Mr. Wood compares to the hump with which the traditional Mr. Punch is adorned. The female has the wings almost suppressed, and both are not much beyond the size of a good-sized aphid.

The Snake Flies (Raphidii) form another section of the Neuropterous insects. The designation, both in Latin and English, arising from the length of the prothorax, which forms a peculiar neck, supporting a head also peculiar in shape. These flies are most common near ponds and rivulets, though from their preying on winged insects, they occasionally visit gardens when flowers are abundant, and attract flies by their honied stores. A

female Raphidius has an ovipositor formed of two blades, its use being different from that with which the genus *Panorpa* is furnished, as the eggs of the Raphidii are thrust under the bark of trees. The larvæ of the Snake Flies present the same singularity as do the imago, according to Professor Westwood; and they are serpent-like in action as well as appearance, on the same authority, for he describes one as creeping slowly along, giving to the body violent jerking motions from side to side. We may assume that it moves thus in order to seize its prey, since in habit it is as carnivorous as the fly. Staveley asserts that though at first torpid, when near the end of its pupation a Snake Fly begins to move about. In neither of these stages are the insects easy to discover. The flies attract notice, however, early in the spring, ere the host of the Diptera are on the wing.

At this time of the year those who are busy in horticultural pursuits, either in or out of doors, are sure to come across individuals belonging to the family of the Myriapods or Centipedes, which, though now by naturalists separated from the true insects, are so commonly associated with them in popular phrase that they may claim a passing mention. Reputed to be hostile to the garden, they are not all deserving of this bad character. Everyone is doubtless at times a vegetable feeder; but the species belonging to the "Hundred Legs" section of the Myriapods are also destroyers of insects, some even that are larger than themselves. The "Thousand Legs," on the contrary, do mischief without any alleviation. In both divisions the names are not to be taken literally, it must be remembered, for the Julidæ, common types of the "Thousand Legs," have about three hundred feet, and if we count the legs of a Scolopendra, by no means could we make out anything approaching the hundred. In all these species the insect commences life with a moderate number of legs, and grows more by degrees as it increases in size and strength. The Centipedes proper, Scolopendra, are undoubtedly good



METAMORPHOSES OF THE SCORPION FLY.

hunters; the head, which is horny and shield-like, has beneath a pair of formidable jaws, which cut sideways. Under the microscope we detect a slit near the extremity of each edge, from which it is presumed a poisonous liquid is instilled into the wound. The legs of a Centipede allow of rapid locomotion, and they are covered with such tough scales that a considerable amount of pressure does little harm. We are too apt to imagine that when we discover a Centipede on some plant it has visited the plant to do mischief, whereas it is often merely intent upon the slaughter of other species. Lord Avebury has given an interesting account of several small Myriapods of the genus *Pauropus* observed by him to be racing about rapidly among dead leaves; and of one named *P. Huxleyi* he states that it is a "bustling, active, neat, and cleanly little creature," which seems a curious collocation of adjectives, and it has also "a look of cheerful intelligence, which forms a great contrast to the dull stupidity of the Julidæ, or the melancholy ferocity of most Chilopods." These Centipedes have one long alimentary canal, therein resembling Lepidopterous larvæ. They pass through no regular transformations. The study of insect life could be begun at this period of the year.—ENTOMOLOGIST.

NOTES & NOTICES

Weather in London.

Thursday, Friday, and Saturday were clear days and very agreeable. Sunday morning was foggy, but the day proved exhilarating afterwards. Monday was of a similar character, but Tuesday was damp and somewhat foggy throughout.

Death of an Old Botanist.

On the 17th inst. the death occurred of Mr. Jephtha Makin, of Owl's Nest, Clifton, near Manchester. The deceased was well known amongst botanists in the locality. Some time ago he was awarded the Royal Humane Society's certificate for saving two lives last February from drowning in a frozen pond. He fell after having his tea, and died immediately.

National Flower for America.

A meeting of the National Organising Commission of the National Flower Congress was held at New Britain, Ct., October 1, to consider the subject of adopting the Carnation as a national flower. The Carnation was the favourite flower of President McKinley, and the Commission thinks it would be an honour to the late President to have this adopted. The prevailing sentiment, however, of the National Flower Association is divided between the Goldenrod and Columbine, which two are in the lead.

Tomato Judging at the Fruit Show.

We have received the following letter from Mr. W. H. Dyer, Mitchett Nursery, Mitchett Road, Frimley, Surrey, who competed in Class 31, market-growers' section, at the Crystal Palace Fruit Show, October 10, 11, and 12:—"On page 360 of to-day's 'Journal' [October 17] I see you state that Messrs. Poupart and Sons had second prize for 12lb of Tomatoes. This was so in the morning [when our report was written], but a protest was subsequently entered against the award: the judges had overlooked their instructions. The rule says that, 'Boxes or baskets piled up above the edge of the rim will be considered unsuitable for travelling, and will be disqualified.' Messrs. Poupart and Sons were disqualified on this account. The second prize went to Mr. W. H. Dyer, Mitchett Nursery, Frimley, with Tomato Dyer's Seedling." Truly judging is an onerous business, and even small classes demand the greatest conscientiousness.

The Late Mr. James Service.

It is with deep regret that I have heard of the death, after a few hours' illness, of Mr. James Service, the well-known nursery and seedsman of Maxwelltown, Dumfries, in the 77th year of his age. Mr. Service was a native of Ayrshire, where his father was an extensive farmer. Beginning work early on a farm, he afterwards entered the nursery of Messrs. Samson and Co., of Kilmarnock, as an apprentice. There he studied both branches of the business he intended to pursue, afterwards going to Coodham to further improve his practical knowledge. In 1848 he became gardener to Colonel M'Murdo, of Mavisgrove, near Dumfries, afterwards going to Netherplace, Mauchline, as gardener to Lord Justice Hope. From there he went to an appointment near Carlisle, which he left to begin business in Dumfries, afterwards removing his nurseries to the sister burgh of Maxwelltown, where he carried on a most extensive business until his death, assisted in later years by his two sons, Mr. Robert Service and Mr. Joseph Service.

Mr. Service was widely known and as widely respected by many interested in gardening and gardeners, and the writer has had many pleasant and cheery conversations with him upon these kindred topics. His conversation was full of anecdotes of the men he had met in his long professional career, and it was always a pleasure to come across him, and to have the pleasure of a talk with him. Mr. Service took a life-long interest in florists' flowers, and was for many years a prominent exhibitor of Gladioli and Dahlias. It was one of his boasts that he was among the first, if not the first, to lower the price of Dahlias to a cost which placed them within the reach of the many, and did not render them only the enjoyments of the few.—S. ARNOTT.

New Fields for Asparagus.

The dunes or sand hills on the French coast, which have been found difficult to fix, unless by planting on them a certain kind of grass, are turning out a valuable field for the market gardener's efforts. They afford, it seems, the best soil for the cultivation of Asparagus.

Professor Underwood as Plant Collector.

Professor L. M. Underwood, of the chair of botany in Columbia University, has returned from a collecting tour in Porto Rico, bringing a fine collection of Cacti from the arid southern part of the island; about seventy-five varieties of seeds, many of which have already germinated in the propagating house; several museum specimens, and about 1000 specimens from the herbarium. The funds for this expedition were contributed by Mr. W. E. Dodge. The Vignor Herbarium, purchased by funds contributed by Mr. Andrew Carnegie, is beginning to arrive at the Botanical Museum.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, October 29, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "The Importance of Mechanical Forces as Displayed by Plants" will be given by the Rev. Prof. Geo. Henslow, M.A., V.M.H., at 3 o'clock. At a general meeting of the Society held on Tuesday, October 15, thirty new Fellows were elected, making a total of 790 elected since the beginning of the present year. At the meeting on November 26, instead of Professor Henslow's demonstration, a lecture will be given by Mr. J. E. Austin on "Whole Fruit Preserving in Relation to Fruit Culture." Mr. Austin will also exhibit a large number of specimens of bottled and otherwise preserved British fruits.

Mr. Yates Thompson.

Liverpool's youngest freeman is Mr. Yates Thompson, who has received the honour in recognition of his munificent gifts to his native city in the shape of handsome laboratories in University College and Palm houses in two of the public parks. Acknowledging the honour, and referring to the statues which he had chosen to adorn the gardens, Mr. Thompson observed that the name of the first of these, John Parkinson, would not, perhaps, be very familiar. It had not been long familiar to himself, and his statue was really there because their old townsman, Mr. Enoch Harvey, a great gardener himself, had spoken of his merits, and of the fact that he was the author of the first books in which flowers and plants in a garden were dealt with, not for their medicinal virtues, but for their beauty and scent. Thus he thought that he would put him first in the list of gardeners, and there he stood in the Elizabethan costume—he was apothecary to James I.—and the sculptor, being eminently practical, had also clothed him with an apron to protect his costume from the soil and dust.

Liverpool Root and Fruit Show.

A beautiful October day; the record as regards exhibits; the Lord Mayor to open the Show. Such were the inviting conditions under which the managing committee held their twelfth annual exhibition on Saturday last, in the grounds adjoining the North Haymarket. The president, R. Webster, Esq., introduced his lordship, who delivered an able speech. The display of Potatoes was little, if anything, behind the metropolitan shows, the quality being absolutely perfect, whilst the exhibits were enormous in every class. For an early white kidney variety Mr. J. Parker won with the handsome sort, Duke of York. The best early round white came from Mr. T. Alty with Best of All; second early white kidney, Mr. T. Percival with Prime Minister; second early round white, first and special, exors. of Peter Davies, with grand Goldfinder; early, or second early, any other shape, Mr. B. Ashton, gardener to Lord Lathom, Lathom House, Ormskirk, with Ideal. The best Sutton's Regents came from Mr. J. Johnson, Mr. Ashton taking honours for Lord of the Isle. Colossals were perfect from Mr. J. Needham, and Sutton's Abundance from Mr. John Halsall. Mr. George Ashley had Satisfaction in grand form, as was the variety Up-to-Date from Mr. James Parker. The fleeting Maincrop was quite perfect from Mr. Threlfall.

[This paper is now composed by Linotype machines, and goes to press earlier than hitherto; thus our correspondent's full report, the second half of which came too late, is of necessity held over.—ED.]

The Gardeners' Royal Benevolent Institution.

The sixty-third anniversary festival dinner of this Institution will be held on May 28 at the Hotel Metropole, under the presidency of his Grace the Duke of Marlborough.

Royal Gardeners' Orphan Fund.

At a meeting of the committee, held on the 16th inst., it was resolved to hold the annual meeting in the Essex Hall, Essex Street, Strand, W.C., on Friday, February 14, when an election of candidates for the benefits of the fund will take place, nominations for which must be delivered to the Secretary not later than December 16 next. It was also arranged to hold the annual festival in aid of the fund in the Victoria Hall, Hotel Cecil, on Thursday, May 8, when Leopold de Rothschild, Esq., has kindly consented to preside. Forms for the nomination of candidates can be obtained from the Secretary at his new address, 30, Wellington Street, Covent Garden, W.C.

Cauliflowers in Cornwall.

The Cauliflower season has begun very badly in Cornwall, as there seems no very great demand for the vegetable just now, and the mild weather has enabled the up-country growers to put almost a sufficient quantity on the markets themselves. A Lelant grower who sent four crates to market last week got back ten pence as his share of the profits! Unless Cauliflower can realise at least five shillings a crate it does not pay to grow, for distant markets at least. There seems to be no very loud complaint with regard to railway charges. But it must be obvious, says the "Western Mercury," that if there were a reduction in rates, and taking the season all round, Cauliflower growing in Cornwall would become more of an industry than it is at present.

The Horticultural Directory.

Secretaries of all Gardening Mutual Improvement Associations and Societies are kindly requested to send address and title of their organisations to the Editor of the *Journal of Horticulture*, at 12, Mitre Court Chambers, Fleet Street, London, E.C., for insertion in the coming edition of the "Horticultural Directory," which is published at the beginning of December. We would also feel obliged to those gardeners who have changed their addresses since the last publication by their sending us notice of the change. Gardeners or friends who know of changes in their neighbourhood might likewise assist. "The Horticultural Directory" has become the recognised reliable publication for the names and addresses of gardeners, nurserymen, seedsmen, curators, &c., in the United Kingdom, and we endeavour yearly to make this directory as correct and complete as possible.

Croydon and District "Mutual."

The Society's meeting was held in the Art Gallery, Park Lane, on Tuesday evening, October 15. There was a large attendance of members and friends, including a fair number of ladies, to meet Mr. Kromer, Roraima Nursery, Bandon Hill, Croydon, who gave his most interesting and entertaining lecture on "An Orchid Collector's Travels through British Guiana and Brazil." Mr. Kromer gave a most graphic and interesting description of his travels in search of the beautiful *Cattleya Laurenciana* and other rare Orchids, detailing the various kinds met with, their natural condition of growth, &c. The natural features of the country were beautifully illustrated and charmingly narrated. The manners and customs of the natives were dealt with. The value and use of money being unknown to the natives, all transactions were done with barter goods, the enumeration of which was most amusing, the journey through the Savannah and ascent of the mountain of Roraima (8,600ft high), the arrival at the top, the cooking and sleeping arrangements (Mr. Kromer and his companion were the first white men to sleep on the mountain). The photographing of the various scenes, events, and collecting by field, flood, and mountain were most aptly described. The descent from Roraima, with its mishaps and adventures, formed interesting patter. Many valuable and useful hints to Orchid growers were specially noted. The lecture was illustrated by about forty-eight slides from photographs taken en route by Mr. Kromer. The lecture, though somewhat long, never flagged from start to finish, and frequently met with hearty applause. On the proposition of the chairman, Mr. W. J. Simpson, supported by Mr. M. E. Mills, an unanimous vote of thanks was given Mr. Kromer. The subject of next meeting is "November Fruits and Flowers."—J. GREGORY, Hon. Secretary.

The Rose Analysis.

The annual Rose analysis prepared for the *Journal of Horticulture*, by Mr. E. Mawley, an hon. secretary of the National Rose Society, will appear in next week's issue.

United Horticultural Benefit and Provident Society.

The dinner on the 9th inst. resulted in the addition of twelve new honorary members to the list (including one life member). The donations were as follows:

MANAGEMENT FUND.				CONVALESCENT FUND.			
Geo. Dickson, Esq.	£2	2	0	Peter E. Kay, Esq.	£5	5	0
T. N. Cox, Esq.	1	1	0	N. N. Sherwood, Esq.	5	5	0
L. de Rothschild, Esq.	1	1	0	W. G. Baker, Esq.	5	5	0
R. Dean, Esq.	1	1	0				

A Record Mushroom Harvest.

The Mushroom season in Cumberland—now on the decline—has been the most prolific on record. From Wigton alone there have been despatched to the large provincial towns no fewer than 53 tons, in 12,000 baskets. The local price given to the gatherers has for some time been only a shilling per stone, and, comparing this with the retail price in the large towns, it will be seen that somebody makes enormous profits.

Royal Appointment.

Messrs. Mackenzie and Moncur, Limited, of Balcarres Street Works, Edinburgh and 8, Camden Road, London, N.W., have received the Royal Warrant as hothouse builders and heating engineers to His Majesty the King. They received a similar appointment to the Prince of Wales in 1892, and since then important contracts for the erection of hothouses in Sandringham gardens as well as for heating and hot water supply apparatus for Sandringham House, York Cottage, and Appleton House have been entrusted to them.

Testimonial to Mr. Richard Dean, V.M.H.

At the moment of going to press Mr. William Cuthbertson, acting as an hon. secretary, together with Mr. H. J. Jones, to a committee of prominent horticulturists, sent us a circular letter that is being issued relating to a testimonial which the body of horticulturists referred to have decided to offer our good friend, and most useful of floriculturists, Mr. Richard Dean, of Ealing. Most of us have at least a slight conception of the valuable services Mr. Dean has rendered to horticulture—in the broad sense—and thus to his country. Space forbids an extended notice of his services in this week's issue, but we cannot do better than ask all those readers who are interested in this most commendable resolve to drop a card to either of the secretaries, Mr. Cuthbertson, at Rothesay, or Mr. Jones, at Lewisham, S.E., asking them to forward the said circular letter. Mr. N. Sherwood, of Messrs. Hurst and Son, 152, Houndsditch, London, is hon. treasurer and chairman of the Acting Committee, and to him subscriptions are invited to be sent direct. So far the sum of £73 6s. 6d. has been promised by a large number of the most influential gentlemen either directly connected with horticulture or who simply interest themselves in it for its own sake. A meeting of subscribers will be held in London to decide what form the presentation shall take, and when and how it will be presented.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—eight above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. October.										
Sunday ...13	S.S.E.	deg. 48.4	deg. 48.0	deg. 55.9	deg. 42.3	Ins. —	deg. 53.0	deg. 55.0	deg. 56.0	deg. 38.0
Monday ...14	N.E.	48.1	47.6	58.4	40.5	—	51.7	54.6	56.0	34.6
Tuesday ...15	S. + .	44.9	44.6	54.9	42.0	0.03	51.5	54.5	55.8	38.3
Wednesday 16	S.E.	53.1	52.6	59.2	43.7	0.25	51.1	54.3	55.7	39.8
Thursday 17	S.S.W.	57.7	53.3	61.5	47.9	0.11	52.5	54.1	55.5	39.5
Friday ...18	S.E.	57.4	54.2	58.2	50.5	0.23	53.2	54.3	55.3	42.5
Saturday 19	S.W.	50.9	48.9	59.2	37.4	0.02	50.8	54.3	55.2	31.7
MEANS ...		51.5	49.9	58.2	43.5	Total 0.64	52.0	54.4	55.6	37.8

Dark dull foggy weather, with rain on five days.

Figs Under Glass.

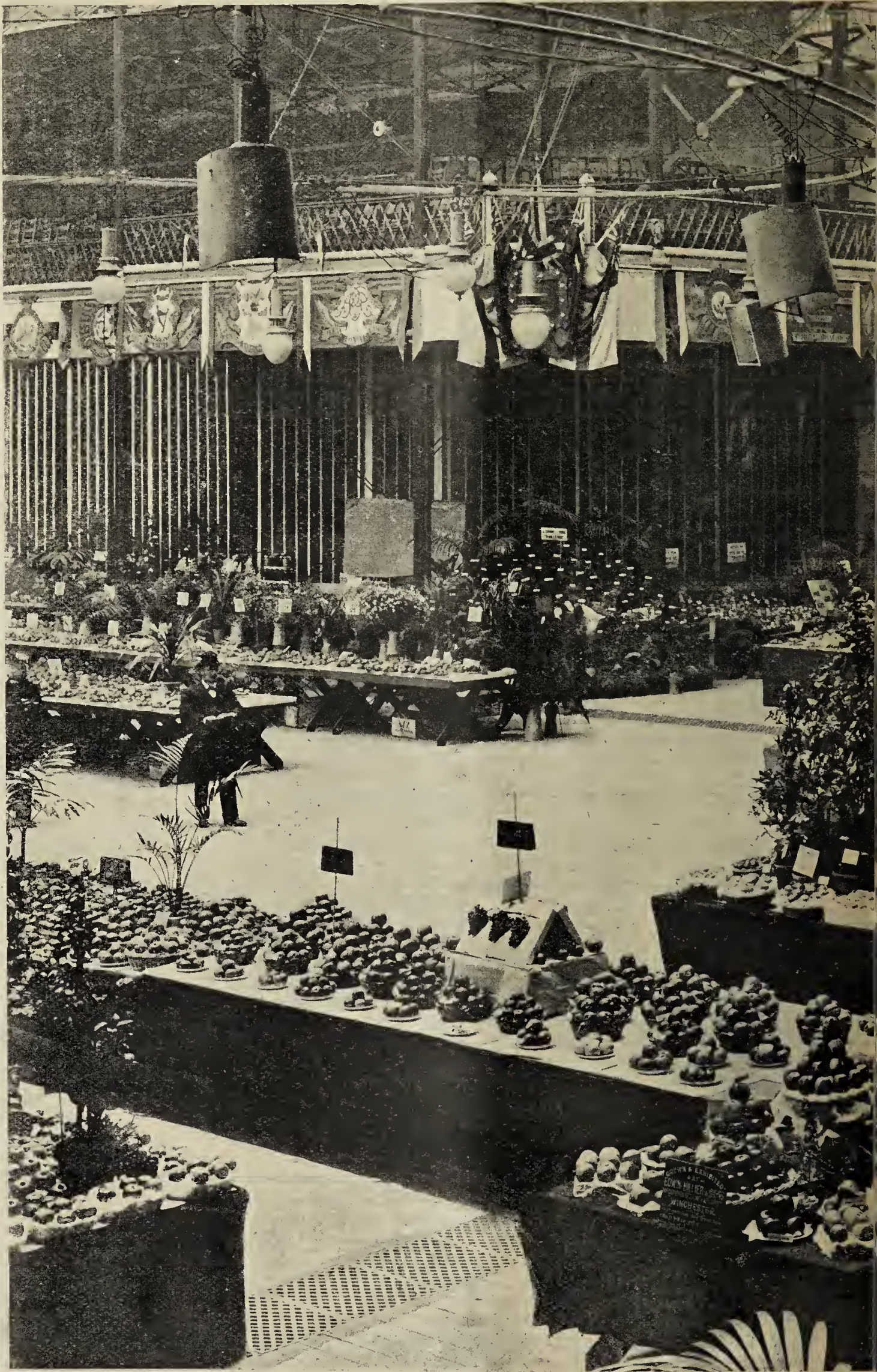
The early forced border trees should be untied from the trellis when the leaves are all down, and the needful pruning effected. Those with the roots restricted to small borders will only require to have the shoots thinned where too crowded, cutting back at the upper part of the trellis, allowing room for the extension of the new branches or successional growths. Trees that have not the roots restricted will require cutting back at the upper part of the trellis, thus allowing room for the extension of the lower branches. Luxuriant trees may be root-pruned, or the cutting out of growth will only tend to render the trees more unfruitful. The trees should be washed with an insecticide, and be secured to the trellis loosely. Remove the loose surfacing soil, remains of mulchings, point the surface over with a fork, and supply a dressing of fresh loam about 2in thick, and sprinkle with 4oz per square yard of steamed bonemeal three parts and best quality kainit two parts, mixed; then a light mulch of partially decayed manure, lumpy yet short. Give a good watering, ventilate freely at all times, except when frost prevails, when keep closed, and turn on heat to exclude it.

Where trees are not ripening the wood well in succession houses, turn on the heat in the morning and admit air only to induce a circulation of air through the house, throwing the ventilators open at night, the heat having been turned off at midday. This will assist the maturation of the foliage; but any unfruitful trees must be root-pruned, and the roots restricted to moderate sized borders, depending more upon active feeders near the surface, encouraged by light mulchings, than a large extension of roots. These operations must be performed when the leaves give indications of falling. Make the soil firm, employing one-sixth of old mortar rubbish and a similar proportion of road scrapings. Prune the trees when the leaves have fallen, cleanse the house, and put everything in order. Dress trees that have been infested with insects with an insecticide. Scald the woodwork and walls with hot water, keeping it from the trees, yet washing them with a warm, soapy solution before applying the insecticide. Keep the house cool and dry, but do not allow many degrees of frost to enter.

Excessively luxuriant trees in late houses should be attended to in lifting and root-pruning as before advised. Fig trees can hardly have the roots too much restricted for fruitfulness, being also more under control, and can be fed according to requirements. Trees in unheated houses should have free ventilation, and when the leaves fall the trees must be unloosed from the trellis, be tied together in convenient bundles, and made safe against frost with some straw or fern over them, encasing the bundles in mats. In heated houses this is not necessary in severe weather. Trees in cool houses should have the roots protected by a covering of dry material.

—GROWER.

BIRD'S-EYE VIEW OF THE CR



Single Dishes of Fruit.

Mr. G. Caselton,
Messrs. S. Spooner & Sons,
Corner of Messrs. G. Bunyard & Co.'s Table of Pot Trees.

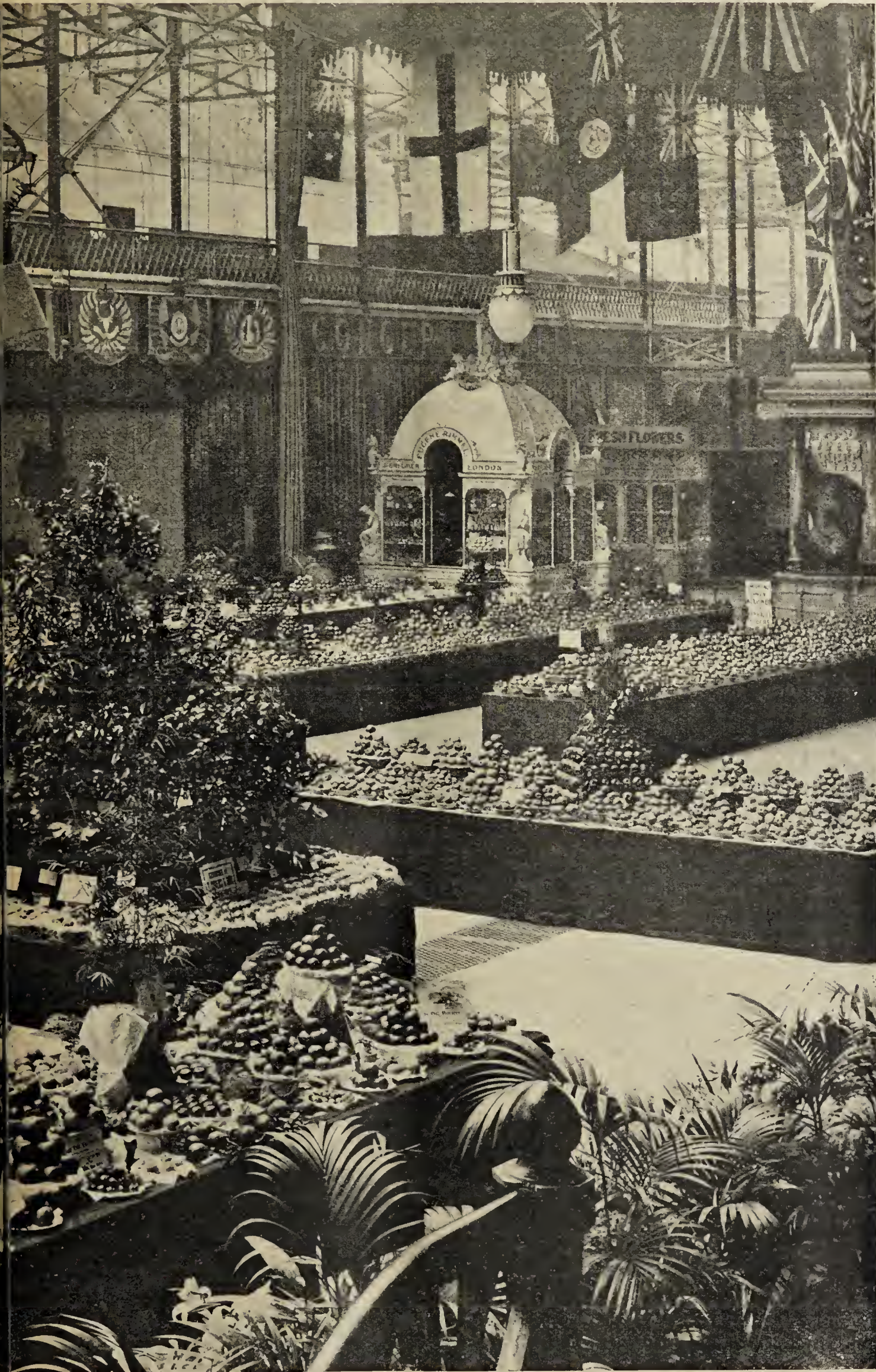
Mr. Will Taylor.

Cannell's Cannas.

Messrs. Peed's Begonias.

Messrs. E. Hillier

CRYSTAL PALACE FRUIT SHOW.



Fruit Show Notes.

Last week we furnished a photographic illustration of the group of judges, referees, and friends at the Crystal Palace Fruit Show; to-day we provide a bird's-eye view of the central portion of the exhibition, which will no doubt be of great interest to those of our readers who live far away from London.

The tables were staged in the central part or arena between the north and south transept, with the great Handel organ on one side and a raised audience gallery on the other. Neither of these come into the photograph. The system of arrangement this year had much to recommend it, being consecutive and very orderly. In some previous years the single-dish classes have been continued along the length of tables, almost hidden away around the edges of the interior precincts. Both from the point of view of effectiveness and of facile location of any class one may desire to inspect, this year's mode of arranging the tables seemed to us commendable.

Of course, the Crystal Palace authorities and the presence of other extraneous exhibitions within the Palace, necessarily insist on certain conformities to be complied with yearly. While referring to the disposition of the show, it is only generous to name the Rev. W. Wilks, the Society's secretary; Mr. S. T. Wright, Mr. T. Humphries, and Mr. F. Reader, the Society's superintendent, assistant superintendent, and cashier respectively, and also the superintendent of the Crystal Palace gardens and plants indoors, the unassuming yet ever helpful Mr. G. Caselton, all of whom had a large amount of work allotted to them in connection with this show.

The names of the principal exhibitors are furnished beneath the illustration. Messrs. George Bunyard and Co.'s trees are only evidenced by a small corner, which is unfortunate, as this is one of the finest, most imposing, and one of the best arranged collections in the exhibition. Messrs. Hillier and Son's produce from the chalk hills near Winchester is conspicuous; and so is Mr. W. Taylor's from Hampton, in the Thames Valley. The splendidly grown pot fruit trees sent by Messrs. Rivers and Son are seen as a conical group rising up in the centre, and Messrs. Cannell's fruit and Cannas, the Swanley Horticultural College display of preserved (bottled) fruit, and the tables running off at a tangent in the perspective and containing the gardeners' and amateurs' competitive entries, are the main features on view in our illustration.

Much more taste could advantageously be elaborated by exhibitors at this great fruit show. If the general public are to be attracted annually, novelty in some form, slight or great, must be initiated. Coloured leaves between the dishes of fruit are of very doubtful value in giving effect; green baize as a ground-colour is deplorable, though the edges of the tables ought to be draped with it. Too close setting of the dishes is better to the view than a meagrely filled table.

Messrs. Cannell & Sons.

Messrs. J. Veitch & Sons, Ltd.

Earl Roberts' Statue.

Messrs. G. Bunyard & Co.

Jersey Produce.

Messrs. Paul & Son.

Messrs. Rivers & Son's Group of Pot Fruit Trees.



Canadian Apples.

I read with interest a letter which lately appeared in the columns of the "Glasgow Evening Times," regarding Canadian Apples. Should it be found possible to introduce these of a good quality at reasonable prices there is no doubt a market here, and it is to be hoped they will be put up in sizes which will suit those who prefer to buy in moderate quantities at a time, and that they will not pass through the hands of too many middlemen ere they reach the consumer. So far as the writer's experience goes, really good dessert Apples are always too dear, and sometimes very difficult to get. As I am writing on this subject, I would like to ask those who have experience in growing Apples in the West of Scotland what are the best sorts to grow suitable for dessert during this month. I have grown several of those usually recommended, but even in a fine summer like the present have found none entirely satisfactory, except for cooking purposes. I feel sure information on this point would be of general interest.—POMONA, Glasgow.

On Gardening Literature.

The journals of an industry, profession, a cult, or a hobby, provide more or less dull reading, at least to an outsider, and gardening papers must certainly be included. Of course, those interested in their information do not see this side of it, for enthusiasts will wade through tons of dry reading to find a new idea on their favourite pursuits. But that gardening matters can be conveyed forcibly in a manner far removed from "dry" is very evident from some of the articles in recent numbers of the *Journal of Horticulture*. I refer to those under "Young Gardeners' Domain," and particularly to the article entitled, "Among the Grape Thinners." Beginners, old and young, will not less easily remember the importance and method of manipulating "Pots and Crocks," for the humour, mixed with the instructions so clearly given in the article; and I for one feel confident of being able creditably to thin Grapes (if ever I need to seek that anybody's job) after reading the delightfully humorous descriptions of how various curious specimens of humanity contrived *not* to do it. If you give us such fare, even those who are not enthusiastic gardeners will be unable to pronounce the *Journal* dull. I, therefore, beg respectfully to sign myself—
OLIVER TWIST.

Flowers in the Industrial Districts.

From what one sees attempted, and successfully too, in London's centre, in the culture of flowers, it is evident that the appeal made in the following letter which I send you from the "Western Mail," ought to find a wide response. Our townfolk do not know how much they might grow even in their windows, for few of them have tried in the past. Anything green is more pleasant and beautiful than the unending and unvaried stretch of grey or black walls. The letter which I refer to is signed by one who resides in a colliery district. It runs thus:—"A short time ago, in the course of one of the admirable speeches with which Lord Rosebery occasionally brightens the lives of his fellow countrymen, he described the pleasures of the imagination which may be derived from the perusal of works on gardening and horticulture when the reader's surroundings are of a gloomy and depressing character. This morning when I opened my newspaper I was seated in a dismal mining village in the Welsh 'Black Country,' and as I read a charming article on Roses and an instructive and graceful leader on floriculture, I felt the truth of his lordship's observation, and that existence had been made more endurable by a passing mental glimpse of the lovely Rose gardens to which Mr. Grant referred. But I am not writing for the purpose of detailing this pleasant experience. My object is to urge upon the inhabitants of South Wales the desirability of creating gardens and flowers for themselves, on however humble a scale. It may be impossible to rear Roses and rare flowers in colliery districts, but there are flowers of other descriptions which might readily be produced, and which would give an added pleasure to the lives of those persons who are privileged to see them. 'A thing of beauty is a joy for ever,' and we know on the highest authority that even Solomon in all his glory was not to be compared with the Lilies of the field. There is no necessity for the various urban and district councils to obtain

powers to compel each ratepayer to spend an hour daily in the cultivation of his garden. The object which you and I have in view can be better achieved by the more effective method of stimulating the interest of the people in the delightful pursuit of gardening, and by the display of a little kindly interest on the part of those who have it in their power to brighten the lives of the workers." Those who love gardens and flowers, and know most about them, will be the heartiest supporters of our friend.—W. T.

Waxy v. Flourey Potatoes.

In his remarks prior to introducing Mr. Robert Fenn to those present at the luncheon given to the judges in the fruit competitions at the Crystal Palace on October 10, Rev. W. Wilks stated his preference to be in favour of waxy Potatoes. Happily the majority seemed to find disfavour with Mr. Wilks' likes; and what on earth tempts you, Mr. Fenn, to undo your grand work by raising waxy Potatoes at this time of day? Mr. Fenn stated that he had obtained a new Potato of the kind mentioned by Mr. Wilks. It was, however, more like butter than wax, and would melt in the mouth. He had sold it, and in five or six years it will be in commerce. Of course tastes differ we all know, but those who like waxy, indigestible Potatoes, with their tendency to "greening" and rankness, are very greatly in the minority.—ADVANCE.

Hints on Establishing Fruit Trees.

That there is good deal of thoughtlessness displayed in the cultivation of fruit no one will deny. It is a pity this should be so, because if anything requires thoughtful and intelligent care from the outset it is fruit trees and bushes. The careful selection of a site for the trees, where they will be not only sheltered from the full force of strong winds, but fully exposed to the sun, demands attention. The protection should be ample, but it must not be excessive so as to drain the ground of moisture and food, causing the spread of insects and diseases.

The due preparation of the soil is a matter of supreme importance, and should be undertaken with the full and complete intention of providing for the trees a decidedly appropriate root run, free from stagnant moisture below, and one, too, that will not readily be denuded of moisture by a prolonged dry period. It pays to spend time over preliminary matters in connection with a fruit plantation before introducing a single tree. To decide on having a fruit plantation in a hurry, skim over the surface a foot deep, and plant as many trees as possibly can be crowded into it, probably late in the spring, is to court and deserve failure. A bad start is made, and time apparently gained is ultimately lost, and more still. In such cases it would be better to defer planting until the following autumn, and in the meantime simply carry on thorough preparation.

Drainage may require attention, weeds eradicating, soil ameliorating, sweetening, and fertilising. A summer and winter spent in doing this will not be time lost but gained, in the satisfactory progress of the trees after planting, which should be done in autumn. The forms of the trees should be early decided upon, and their positions set out at the proper distances apart they are permanently to occupy. The trees themselves in the nursery ought to be selected some time previous to their being required, with a view to securing clean and healthy, shapely and well-rooted specimens. Trees or bushes that have been frequently lifted and replanted are the best, and not more than three years old, as such possess a fair quantity of fibrous roots, which are a great help to quick re-establishment.

The planting ought to be carefully carried out, pruning the roots smoothly, laying them out to their full extent, and staking promptly. During the first summer mulehing over the roots with a light covering of manure will be essential, and watering may be necessary, the encouragement of free growth the first year being indispensable to lay a thoroughly good foundation. The after treatment of the trees must be regulated by their growth, whether free or restricted. It will be absolutely necessary to closely follow the rules laid down by the best authorities for the management of each, so that in a few years perfectly developed trees are obtained which will prove remunerative, and in every way satisfactory. Insect and parasitic pests are largely the outcome of inefficient management, and are not nearly so troublesome when the right methods of culture are followed from the first. Of course, watchfulness is required to guard against a possible invasion of such pests as American blight, means being taken to exterminate it as soon as possible if it appears.—S.



Coming Chrysanthemum Shows.

The following fixtures are advertised:—

Battersea, Nov. 1st.	National Chrysanthemum,
Bradford, Nov. 15th.	Nov. 5th.
Brighton, Nov. 12th	Parkstone (Dorset), Nov. 7th.
Bristol, Nov. 13th.	Southampton, Nov. 5th.
Cardiff, Nov. 5th.	Scottish Horticultural, Edin-
Croydon, Oct. 29th	burgh (£400 prizes), Nov. 15th.
Derby, Nov. 1st,	Windsor, Nov. 8th.
Eccles (Manchester), Nov. 6th	York, Nov. 13th (1st King's
Evesham, Nov. 6th.	Dragoon Guards, and Band of
Hull, Nov. 13th.	H.M. Scots Guards).

Timely Notes.

Chrysanthemums are advancing rapidly now into bloom in the case of those housed early in the month, and feeding may be continued until the blooms are half or three parts open. It is not desirable or necessary to give strong doses of liquid manure, as this may frustrate the object in view, namely, well coloured and perfect flowers. A surfeiting of manurial applications tends to destroy the numerous active rootlets, and thus lessen the support given to the advancing blooms. Let the rule be in feeding, weak and often, sometimes giving clear water between the applications of stimulants. Soft rain water is the best. Once a day at least, morning preferably, the plants must be examined, and if any pots are found to be very dry, so that the plants are on the verge of flagging or drooping, give them a good soaking of clear water. This, however, will not frequently be the case, unless by inadvertence the plants were missed at the previous examination, or bright mid-day sunshine has acted directly on the pots. Water must not be allowed to stand upon the floor, but should be wiped up after each morning's attention.

Constant ventilation is needed by Chrysanthemums, and the ventilators ought never to be wholly closed, except in dull, foggy weather. Artificial heat is also indispensable, not for assisting the growth of the plants, but to dry up superfluous moisture in the atmosphere, and prevent any deposition on the blooms, which is the main cause of damping. Should there be any tendency to damping in the case of a few florets, remove these entirely with tweezers; also at the same time take out twisted or ill formed florets. This, of course, specially applies to exhibition blooms, but it will improve others. The dark coloured blooms, as they develop, like screening from strong sunshine, which is rather apt to take away the colour.

Some growers train the shoots of the incurved varieties on wires near the glass, and allow the blooms to develop hanging down, which preserves the true incurving character of the florets. The disbudding of some of the later decorative varieties may be continued, reducing the buds to one on a shoot. More perfectly formed flowers are thus secured.

Plants which persistently develop side shoots should have these rubbed out. In some collections earwigs give but little trouble, either before or after housing; with others constant trapping is needed to prevent injury to the blooms. One or two insects located in a bloom will soon do a lot of damage. Strips of brown paper folded and placed among the plants are good traps. The insects also hide among withered leaves, therefore keep them picked off. A large collection of plants may be relieved if the specimens which have passed their best are removed. More space can be given the succeeding plants.—E. D. S.

The Lewisham Collection.

Never were healthier or more sturdy plants seen than those at Ryecroft, and which are now in the earliest stage of the floral attractiveness. The foliage is quite remarkable for its thickness, dark colour, "fleshiness," and freedom from spot or blemish. In all these attributes Mr. Jones's Chrysanthemums excel; but it must be confessed the flowers are not so heavy or grand (taking the word to embrace finish, size, and general massiveness) as the robustness of their stems would warrant one to expect. Perhaps we go to Ryecroft in a mood too critical, and expect too much; at any rate, the flowers are a trifle disappointing. The novelties offered during the last few seasons are beginning to show their qualities, and in a week's time the two large span houses will be fully ablaze.

Mr. L. Humphries, the grower, speaks highly of Lili Boutroy, white; Calvat's Sun, one of Calvat's best, a golden coloured variety; Miss Aliee Byron, beloved, as a variety, by every grower; Mrs. R. Darby, likely to prove one of the best purples; Rev. Douglas, one of Weeks' most promising sorts, a beautiful

yellow, with fine petals. Others of merit are Florence Molyneux, Von Andre, Francis Conner, Earl of Arran, Gen. Buller, Master Seymour, Evelyn Douglas, J. L. McKellar, Edith Shrimpton, Lily Mountford, Lady Audrey Buller, and Heavenly Beauty, bright amaranth.

Some Thoughts on Flavour.

What are the conditions which produce the best flavour in fruits? To some extent it is a question of soil and climate; but I am of opinion that the greatest difference is to be found in fruits cultivated indoors, where the soil and climate are under a certain amount of control, therefore we must look for other reasons. As a general rule, too little attention is given to the foliage of fruit-producing plants. It should never be forgotten that the leaf of a plant is the manufactory of all that is good in its fruit. Without perfect foliage you can have no perfect fruit, and there must be a certain proportion between the two if the best results are to be obtained. A pound of fruit requires so many square inches of leaf surface exposed to the light; that which is only partially exposed only partially counts for good, and that which is under the thickest of other leaves might as well not be there at all. But foliage should never be removed in quantity during active growth; we should rather prevent its formation in unsuitable places.

Flavour is mainly a question of plant food and assimilation. You may have a sufficiency of the necessary ingredients in the soil, and yet the plant may be partially starved. This may happen from one or more of several causes:—The soil may be sour from the want of aëration, too much water, or too much nitrogenous manure; it may be insufficiently supplied with water. The leaf surface exposed to the light may be too small, unhealthy, mutilated; or something may happen to prevent certain necessary functions being performed, as when the upper surface is pressed close to the glass, causing it to be saturated one-half of the time and roasted during the other half; or it may be kept too wet by the use of the syringe and steaming process often practised.

For all practical purposes the food of plants, with the exception of carbon, is taken up by the aid of water through the almost invisible root hairs found near the extremities of the newly-formed rootlets, the latter varying in different plants from the size of the smallest thread to that of a large knitting needle. The plant food, after undergoing certain changes, is left where it is required, and the surplus water is evaporated through the leaf pores. If the leaf surface is limited, unhealthy, not exposed to the light, or the pores are in any way blocked, evaporation is lessened, then the ascent of water, and consequently of plant food, is slow. We know that the flavour of fruits grown outdoors is generally inferior in a wet season. This is partly accounted for by the absence of sun, but as fruit grown indoors during the same season is not affected to a similar extent, we must look elsewhere for a part of the cause.

We also know that the leaf pores of a plant open widest when there is most humidity, and that they are not always quick enough in reducing their openings when the atmosphere suddenly becomes drier. The plants then flag, as we call it, and thereby to some extent, by offering less expanse of surface to the light, check evaporation while the necessary re-arrangement in the vicinity of the pores is taking place. I suggest that the enlargement of the openings is an endeavour on the part of the plant to keep up the necessary evaporation which is checked by the moisture from without collecting on the leaf surface, and as, after all, there cannot be the same amount of evaporation as there is in a dry season, there is not the same amount of water ascending from the root, and consequently not the same amount of mineral substances. If this is correct, then it follows that too moist an atmosphere indoors will prevent perfect development, though it may not prevent size being obtained. Flavour is frequently spoiled by the application of nitrogenous manure too late in the season. As a rule, unless the roots of the plant are cramped up in a very small space, as they are in pots, such manure should not be applied when there is the least sign of ripening.

Perhaps the greatest difference in flavour is found in Tomatoes and Gros Colmar Grapes. Many people plant their Tomatoes very close together, denude them of a great portion of their leaves as soon as some fruit is formed, and feed them very liberally with nitrogenous manure. Good flavour can never be obtained in this way. The majority of people do not know that Gros Colmar Grapes ever possesses good flavour. When well finished I consider it better than Lady Downe's or Mrs. Pince. I wish some encouragement could be given to the production of good flavour in this Grape, say by offering prizes in December or January. On more than one occasion people have told me they did not like Gros Colmar, and would never plant it. I have said, "I will give you a Grape to taste that you will like," and, without knowing it was Gros Colmar, they have pronounced it decidedly good.—WM. TAYLOR.

Wild Flowers of Old English Gardens.

October is upon us, yet upon some of our garden walls in North Kent, refreshed by recent showers, the Ivy-leaved Toadflax is still leafy, and has a good show of blossoms yet, the abundance of which, earlier in the season, might have its quaint name of Mother o' Millions. It may also be observed in window-boxes and flower-pots hung from a cottage ceiling, where it had been planted; on walls or roofs it is often self-sown. There are people who think *Linaria cymbalaria* is not a native, but was brought from Italy by some monks of the olden time. It is called by the Italians "Erba della Madonna," but though pretty to look at it is somewhat acrid; yet there are places where it is used medicinally. Gardeners have got two varieties; one of these has white flowers, the other variegated leaves. These look well on rockwork, as does the usual form; all are propagated by seed easily. A natural question is, Why was the name of Toadflax given to this and some allied species? And many might say the shape of the flower possibly suggested it, since the names of Snapdragon, Rabbit's Mouth, Lion's Mouth, and others similar, have been conferred upon these plants. But Mr. Dyer thinks that "toad" was applied in contempt to a bastard or deceptive plant, one or two species having narrow leaves, resembling those of Flax. The common Toadflax is a well known example; *L. vulgaris* has crowded, lance-shaped leaves, and the showy flower-heads, yet low, marked with orange, explain the rural name of Butter and Eggs. As a handsome herb, making 3ft high sometimes, it came into gardens long ago; now the variety *peloria* is chiefly grown, which has a curious five-spurred corolla. One of our poetical botanists praises highly this familiar species:

Then, *Linaria*, mingle in my wreath
Thy golden dragons; for though perfumed breath
Escapes not from thy yellow petals, yet
Glad thoughts bring'st thou of hedgerow foliage, wet
With tears and dew; lark warblings and green Ferns,
O'er-spanning crystal runnels, where there turns
And twines the glossy Ivy.

Somebody has asserted gardeners have no taste for poetry, but this is scandal. There is one species, however, which is occasionally fragrant, the creeping *L. repens*, a rather scarce plant, having blue flowers. It has been found along the sides of the Thames, as high up as Henley, and near to its mouth at Gravesend. I expect it is not discoverable now. Most conspicuous of our British species—some doubt if it is a native, though recorded in many localities—is the Great Snapdragon (*Antirrhinum majus*), which for a long period has had a place in our gardens. A rough cut of this plant, very ancient, is in existence, and the name of Dog's Head attached thereto; the capsule has been compared to the skull of a calf. When growing wild, the flowers, usually rose-coloured, are sometimes white; by cultivation many varieties have been produced, some very beautiful; the oldest is probably the deep crimson one. The plant is an insect trap, for numerous insects enter the flowers by squeezing in at the mouth, to obtain the nectar within; but having regaled on this, a return the same way is impossible, owing to the hairy mouth of the corolla. Some, however, manage to escape by biting a hole in the flower; winged insects do not usually go into this trap. The elasticity of the corolla is indeed remarkable amongst these species. This seems to be a fact, that the Great Snapdragon, though a perennial, is apt to be killed in the English winter, or else it would be commoner as a wild flower. The Sharp-pointed Snapdragon is an annual which has been a nuisance in some Kentish corn fields; its flowers are yellow and brown.

Some have supposed that, in spite of its being a showy and easily obtainable plant, the Foxglove was not introduced early to gardens, because people regarded it with some suspicion or dislike. Certainly I cannot trace it back beyond the reign of George III. Whether Foxglove really was at first "folk's glove" we may never be able to settle, but the species had the repute of being associated with witches and supernatural creatures. Nor is Foxglove, taken literally, so ridiculous as it may seem, because in several countries there existed an odd notion that foxes had a fancy for gloves, and folks tried to propitiate them by laying gloves about their haunts. But the plant has gathered up strange names; it has been called Poppy, and both Cowslip and Cowflop can be certified from the West of England. Tourists in Wales see wonderful specimens amongst its rocky

craggs, Foxgloves 6 or even 7ft high. A pure white variety occurs wild in several localities, and remains constant from seed. Many fine varieties are familiar to us about gardens, where we have other charming species brought from South Europe.

I do not remember noticing a plant in any garden, but Loudon enters the Figwort amongst cultivated species easy to grow. This would be, I presume, the Knotted, or *Scrophularia nodosa*; its numerous flowers are not particularly attractive, and the smell is objectionable. But persons who believed in the story Gerarde refers to, that a piece of it hung from the neck, or kept in the pocket, will keep us generally well, may have grown the Figwort, so as to have the plant handy. Our friends who study plant names are doubtful why this is so called, unless the tubers were thought to resemble a Fig in shape. Another species that has always been rare is the yellow Figwort (*S. vernalis*), a light green plant, and the flower heads remind us of a small *Calceolaria*. It did once grow about the Surrey suburbs of London.—J. R. S. C.

Florists' Flowers: Preparing for Winter..

The past season has been a trying one for Auriculas. The first thing that the grower has to look to is the condition of his frames or pits. One of the most frequent causes of loss with these plants is what is called "drip," which should be guarded against. It is much better to grow them in pits than in frames. It is well before the winter sets in to give them a good fumigation, so as to destroy any chance of green fly. All dead leaves you should carefully remove, then it will be seen whether there are any slugs or snails lurking about the holes of the pots. If left, they will come out at nightfall and destroy the hopes that may have been cherished. It will be well also to gently stir the surface of the soil so that the air can penetrate through it. The grower would be wise, also, to provide himself with some warm covering for the frames in case severe weather sets in.

Carnations and Picotees.

Carnations and Picotees have again had a trying time this season. I do not now flower my plants in pots, but in beds, and it has been a somewhat trying season for them. At one time I thought, owing to the long drought, there would be no grass at all to make layers of, but when the rain did come they made marvellous growth, and the layers look sound and healthy. I do not think that it is well to do as some do—plant out their beds of Carnations in the autumn. They are exposed to all the vicissitudes of our fickle climate, and in severe frosts the plants are often drawn quite out of the ground. I therefore at this season pot the plants singly in small pots, and put them in a frame for the winter. Where there is spare room in a pit, it is as good for them to be there as for the Auricula. Loam with a little sand makes a very good compost for them. They should have abundance of air on suitable occasions, and should be kept free from damp or drip. If these directions are not attended to black spot appears on the foliage, and this unchecked will destroy the plant. I have known whole collections which have been utterly ruined by this pest. Water should be sparingly given, and they should not be allowed to become dust dry. Plants thus wintered should be in good condition to turn out in the spring.

Dahlias and Gladiolus.

A great change has taken place in the public taste for Dahlias. The old Show and Fancy varieties have been very nearly elbowed out by the Cactus and single flowers. When the plants get the first frost it should be the time to lift the tubers. Where these are grown, the tubers should be lifted as soon as the first touch of frost blackens the leaves; although I have some of the former section which have stood out in the open ground during last winter, but then it was a very mild one, and it is better to lift the tubers and place them in a dry situation where the frost cannot get at them.

This fine autumn has been exceptionally favourable to the ripening of Gladiolus seed. Lift the corms when the foliage shows any signs of decay, but they must not be left too long, or frost will lay hold of them. They should be carefully lifted and laid out to dry in some cool place sheltered from rain and frost. There is no better place than a cool vinery. The old corms should be rubbed away, the stem cut down close, and where it is desired to increase the stock, all the small offsets which cluster around the base should be carefully rubbed off and put into paper bags or small boxes, with a little white sand, and then should be placed indoors somewhere where they will be free from harm until the spring. I should add that when any bulbs show signs of disease in spots or blemishes, it is not worth while to keep them, as they will probably go off in a species of dry rot, which disease is the most formidable enemy that Gladiolus have to encounter. Though I have grown the bulbs for upwards of forty years I have never been able to find either a preventive or a remedy.—D., Deal.

Indoor Fruit Culture.

(Continued from page 332.)

The Grape Vine is probably the most generally cultivated of all fruits under glass. It needs no praise nor encomiums from me, as everyone present knows how important a fruit it is, and the fact that, given proper convenience, the gardener can produce Grapes for his employer's table every day in the year, is sufficient to account for the high esteem in which it is held. I need not describe the various methods of propagating the Vine, as the simple one of raising young canes from eyes of the previous year's wood is at once the easiest and best, and with this you are doubtless all acquainted. But the growing of the young Vines from the first, is a point that needs care and judgment.

Many growers appear to think that because a young Vine has to be cut rather hard back after its first season's growth, that therefore its infancy, so to speak, need not be troubled about very much. This is a very wrong idea, and when preparing Vines, either for pot work or for planting out, I have always found it best to give them every consideration; to allow them ample room in light, unshaded houses, and by due pinching of the

When the young Vines have become established and growing vigorously, watch for the first indication of lengthening joints, which usually occurs at about a couple of feet or 30 inches in height, then pinch the Vine to the first leaf of the size of a penny. The lateral that starts should in a few days be pinched entirely out, and this will have the effect of starting the basal or winter bud. Take the resulting shoot on, and treat it this way at about every 30 inches. The stopping prevents undue excess of growth from the leader, and causes a more regular swell or thickening of the rod. In addition the rod will be straight or nearly so, instead of showing the unsightly turns and crooks to where the annual cutting back has been made. But, best of all, the Vine is brought more quickly into a bearing state, as a few bunches may be taken in the second season, and a full crop the third. Some growers have objected to this system; they say that the Vines are not likely to live long when grown this way, but of this I am doubtful.

I have had excellent results for five years in succession from it, and when I left the Vines in question they were in splendid condition, and looked as though they would certainly live a few years longer. It must be kept in mind that the first year's principal leaves stand in just the same relation to the fruit buds

as do those on the laterals in after-years, and they must be carefully preserved by judicious ventilation, and by keeping the laterals thin to admit plenty of light. And while on the subject of pinching, it may be well to mention a fact often lost sight of, viz., that black varieties of Grapes, such as Madresfield Court, Black Hamburgh, and Lady Downe's, always lay on a more perfect colour under a thick canopy of foliage than do white varieties, such, for instance, as Muscat of Alexandria, Foster's Seedling, and Buckland Sweetwater. The latter need plenty of light to finish properly, so the sub-laterals must be suppressed entirely back to the bunch, and only allowed moderate extension afterwards.

The practice of tying back the foliage to allow the light to reach the top of the bunch cannot be too strongly condemned. It ruins the leaves, and by allowing a sudden rush of light to parts unaccustomed to it burns the berries, and causes that thick, muddy look that is so bad a blemish to otherwise fine specimens. One word as to thinning. Always study the variety when using the scissors, allowing more room to the large

varieties, such as Gros Colman and Gros Maroc, than to the sorts with medium-sized berries. And also consider the Vines, remembering that the berries on old and stunted ones seldom swell to a large size, as do those on young, vigorous plants.—H. R. R.

(To be concluded.)



PEAR FERTILITY.

laterals to give the principal leaves their full share of light and air, thus leaving them free to carry out their proper functions of sap elaboration, and the development of strong basal buds. In potting them on, always give small shifts from first to last, and if the young Vines are intended to fruit in their second year—which they will do if properly attended to—the final potting should take place not later than the first week in June.

Vine Planting.

Coming to Vine planting, I can, from my own experience, strongly recommend the rooting of eyes in cubes of turf, and setting these out at the requisite distance apart about the end of May. There is no check to their growth in any stage, and if a crop is required the first season, supernumeraries may be planted, or the space filled with Tomatoes, the latter giving an excellent return for the year's work without obstructing the light, as any supernumerary Vines would do. About the growing treatment I need say very little. If the borders are made as described above, the young Vines carefully nursed until they begin to grow, and a genial atmosphere is kept up, they can hardly go wrong.

But in pinching and training, the popular plan of Vine growers leaves much to be desired. The plants are allowed to rush away and fill the house without any check, and all this superfluous wood is cut away in the autumn. This is an absolute waste of the Vine's energies, and is as unnatural as it is unnecessary. It is usually thought that something very extraordinary in the way of root production is induced by this very large head of foliage, but I have yet to learn that the Vine is much the better for the class of root that is produced under these conditions, and should greatly prefer a smaller and harder root. This, I have every reason to think, is induced by the method of pinching that I have frequently described in the gardening press and elsewhere.

Pear Fertility.

The variety illustrated is a well-tried, very hardy dessert Pear, which ripens about the third week in September. It originated as a seedling in Messrs. Rivers and Son's nursery at Sawbridgeworth, where it does remarkably well. Our figure affords a very honest guide to its appearance in form. The skin is covered with a bright "cinnamon coat of russet, which has an orange tint on the side exposed to the sun. Flesh, half-melting or crackling, very juicy, sweet, and with a rich and highly perfumed flavour similar to that of Williams' Bon Chrétien, much subdued." It is altogether a very excellent Pear, with a rich and refreshing juice, which is sugary, acidulous, and clean on the palate; and one which we think might be more liberally planted than it has hitherto been. It is a great bearer, proving useful for market. In the North it is a safe variety when worked on the Quince. It often succeeds on cold soils where other varieties fail.

Apple Growing on Cordons.

I have never advocated growing Apples for ordinary purposes on this system, when the trees are managed on the lines usually recommended. There are, however, some circumstances under which cordons may be turned to good account in private gardens, and even by men who grow for supplying our markets. The great advantage of the system is that by it we are able to get a very quick return in the shape of fruit, and the fruit is also of a higher colour than that produced on standards. The drawbacks are—that the cost of trees is considerable, and it is generally admitted that they do not last more than ten or twelve years. I think, however, I shall be able to show that the latter drawback is brought about by the treatment the trees receive, and can to a great extent be abolished by adopting a different method of treatment.

When new gardens are being formed, it is a matter of great importance to take steps to insure a regular supply of Apples as quickly as possible; and as by planting cordons good fruits may be produced the second year after, the cordon is a type of tree which must appeal to all who are forming gardens. Again, gardeners taking a new charge often find the supply of choice dessert Apples totally inadequate to meet the demand. If a quarter is at once planted with cordons, in a few years crops of the finest quality are produced. In small gardens, too, where it is desirable to have a regular succession of dessert fruits, too much space would be taken up by planting standards of the requisite number of varieties. Here again the cordon comes splendidly to the rescue, and in many gardens both large and small Apples of very high quality are produced annually on this style of tree.

The treatment usually given to cordons is either to cut back the side shoots to two or three buds in August, or to pinch them to four or five leaves as soon as they have made 6in or 8in of growth, and then cut them back in September to a couple of eyes; the leader being allowed to extend from 9in to 12in each year. And now I come to the point which I wish to particularly emphasise. After trees have been so treated for ten or twelve years, and have during that time borne good crops, they are generally considered worn out, and the majority of writers advocate uprooting them. According to my experience, however, they are no more worn out than a bush tree worked on a dwarfing stock is. At the same age either will, with proper treatment, go on satisfactorily for at least twenty years longer if different tactics are adopted. The truth about the matter is that Nature will not be restricted within such narrow bounds for an indefinite period, then comes a time when the vitality of a cordon is impaired, and vigour can only be regained by allowing greater freedom of growth.

I am intimately acquainted with a large number of cordon trees which were planted about twenty-five years ago. They were kept in that form for a number of years, and then, instead of uprooting them, they were simply allowed to grow freely and form natural bushes. Pinching was discontinued, the shoots kept thinly disposed, and shortened but moderately. To-day those bushes are the envy of hosts of gardeners, and the Apples they produce no exhibition can afford to despise. I have learned a lesson from those trees which I shall never forget; that lesson is, plant either cordons or bush trees on the broad-leaved Paradise stock. If the former, treat them in the ordinary way for a few years so as to get them to fruit early. As soon as they become unsatisfactory, thin out all the weak spurs, allow the stronger ones to grow away, so as to form bushes or pyramids. Plant the cordons 3ft or 4ft apart, and when the time has arrived to allow them more freedom of growth, lift every alternate tree and plant elsewhere. Then, a few years after, remove half of those left, so that the trees retained stand from 12ft to 16ft apart.

Dwarfing stocks have not been in use long enough to be able to state accurately how long trees worked on them will be satisfactory, but my firm conviction is that if they receive proper attention, they will last just as long as those on the Crab or free stock. It is not the stock which shortens the life of a tree; but the continual suppression of its growth.—H. D.

Maggots in Grapes.

On September 26, 1901, I examined part of a bunch of Grapes, and found the berries infested by maggots, as stated by a correspondent, who had sent the specimens to the Editor of the "Journal of Horticulture" for opinion as to whether the like had been seen before or not. I have no recollection of having found, or recorded, any such like phenomenon, and have certainly not found berries so affected in half a century's experience with Grapes, either culturally or pathologically, and I have thousands of the latter cases, yet not one at all analogous to this one.

I read the letter of the correspondent before looking at the specimen, and was so demur that had not the examination verified the statement of "maggoty Grapes" it would not have been credited. This may strike some as prejudice. To upset this there is nothing equal to experience, and the first example of "maggoty Grapes" configured will be that now presented in the "Journal of Horticulture."

To say that I was surprised on examining the portion of the bunch and finding maggots galore therein is nothing as compared with the nausea, the berries giving out a very sour, penetrating smell; nothing like it, fortunately, having hitherto been experienced, and I was pleased when the examination was completed, for it was sickening, make-ill work. What of that? No one is interested! No matter, I made some sketches, and these will be helpful to others wishful to learn and grasp the mysteries of Nature as to myself, still desirous of making acquaintance with facts.

Enough; the illustration will clench the argument. At *A* is shown an affected Grape Vine berry, natural size, with the berry parted from the shank or footstalk, *a*; holding on apparently by the seed or stone-strings, *b*; the flesh putrefying, *c*; and a maggot visible therein, *d*. Who before has seen such a thing? This maggot was taken out of the flesh of the Grape berry, and balancing its body on its posterior end, reared its head and careered to such extent as to be practically "unsketchable" alive. I treated it with dilute alcohol, methylated spirit, aniline, and only got prostration by the use of formalin. A pocket lens, enlarging three times, showed the creature as at *B*, and a ten-diameter lens outlined the animal as at *C*, it having drawn-in somewhat and proportionately widened out. Attention is requested to its mouth part, *e*, and its posterior appendages, *f*.

Some of the berries were considerably destroyed, in flesh, by the maggots, and on, and in this, were certain bodies. An example is represented at *D*, natural size, the sunken part being full of pupæ, *g*, and even one on the skin of the berry, *h*. A magnified pupa is shown at *E*, and another still more magnified, at *F*.

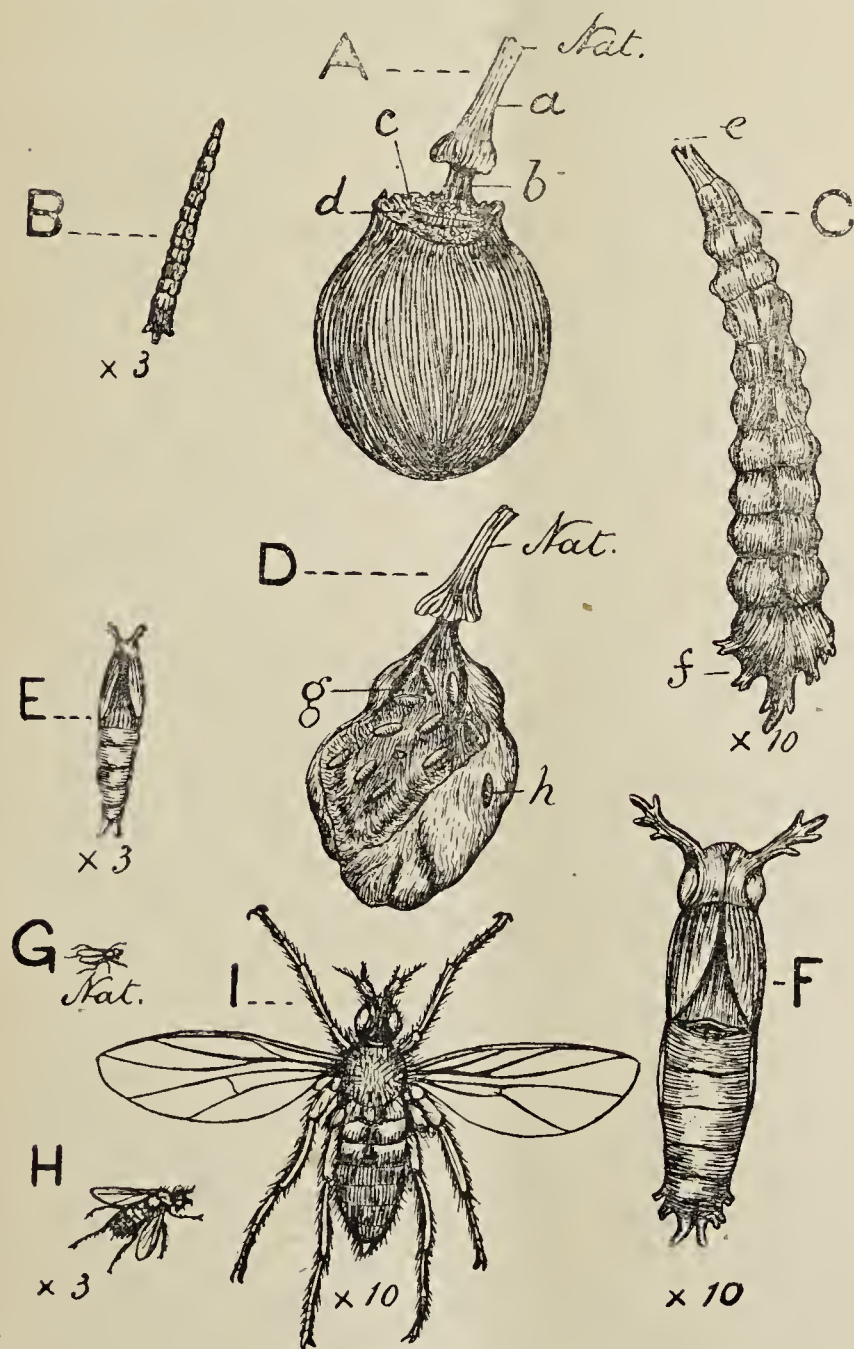
Now, remember, on September 26, 1901, there were maggots, and also pupæ. From the latter two flies emerged on the 29th, and they were quieted by tobacco smoke blown into the box in which they were held captive. On September 30, 1901, one of the flies, fumigated the day before, was found dead; but the other had taken to itself wings and sped away gaily the evening before, for one must need look betimes to see how matters progress. This was no loss, for what is one amongst so many? Another had appeared by the 30th. It is shown, natural size, at *G*, enlarged three times at *H*, and ten diameters at *I*. What fly is it? I do not know definitely, for though bearing a close resemblance in larva and pupa to the Fever fly, *Dilophus vulgaris*, the perfect insect hardly coincides with examples of it I have figured as infesting Hop-cones and the roots of various plants. Perhaps the variation may be due to host; at any rate, the insect is a so-called Fever fly, *Dilophus* species, the males having black bodies, and the females brown abdomen.

In the late Miss Ormerod's "Manual of Injurious Insects and Methods of Prevention," second edition, page 129, *re* the Fever fly, it is recorded that in 1862 the insect was hanging in millions on flowers and in bunches on Grasses on the Norfolk coast, and as appearing amongst the Hop-cones at Rainham, in Kent, in 1882; also as infesting the roots of Hop plants in the larval stage at the beginning of April, in 1884. Curtis, however, appears the first to have noticed the Fever fly as injurious to crops. In his "Farm Insects," page 467, he notices the Fever fly as "exceedingly abundant every year, and the larvæ causing much damage in the gardens." Curtis also, in the "Gardeners' Chronicle," in 1844, noted a considerable number of Fever fly maggots in "a Vine border amongst the horse-muck."

Now the Vine border where the Fever fly maggots were found later on infesting the bunches of Grapes and sent to me, was mulched with short manure, a practice pursued for many years without any disaster; but, on the other hand, profit to the Vines. Assuming the grubs of the Fever fly to have been introduced in the manure, what was there different in the clusters of Grapes to induce the Fever flies to deposit their eggs upon them, or even in the berries in 1901, to what there were in similar bunches in previous years? Where is the predisposition doctrine?

Perhaps the berries, or some of them, had become cracked at the junction of the footstalk with the berry, and the flesh thus exposed taken advantage of by the Fever fly to deposit its eggs on, or in, the flesh forming a favourable feeding ground for the maggots that would hatch out. That the Grapes were infested there is no question, and they set up a ferment (no bacterial bodies were found) on their own account, speedily converting the berry, and even the whole of a cluster of Grapes, into a putrefying mass, with, as before quoted, a most sour, penetrating, nauseating smell. But what Grape-grower has not had cracked berries without attack of Fever fly, and even where the border is mulched regularly with cow or horse manure? Is not this immunity due to there not being any Fever flies about? Or if they are present (as Curtis states "every year"), why should the phenomenon, as configured, occur so seldom?

I may say that the flies are readily destroyed by fumigation with tobacco paper, or, better still, by vaporisation with nicotine compound. The maggots, however, are very tenacious



"MAGGOTY" GRAPES.

of life, and are most quickly acted upon by corrosive substances, such as lime, a well-known corrective of sourness in land and in produce.—G. ABBEY.

A Lily Farm.

Not far from the Sussex station of Balcombe, there is a small house known as Kemps, and there is round about it an acreage of the beautiful *Lilium lancifolium*, which is the floral stock-in-trade of the two sisters whose home it is. The two sisters manage the business entirely themselves, the only extraneous help coming from a man and a girl, the former aiding with the growing of the flowers, and the latter being especially employed in denuding the blossoms of their anthers, which, if left on, would soil the pure white petals in the packing. The packing is a very important and a very heavy portion of the day's work, and on an average in the Lily season as many as 200 dozen are sent off daily. The boxes to hold this fragrant merchandise are, of course, specially prepared ones, and they are sent backwards and forwards between Kemps and Covent Garden with the utmost regularity.

Societies.

Royal Horticultural—Scientific Committee, October 15th.

Present: Dr. M. C. Cooke (in the chair); Messrs. Houston, Bennett, Druery, Saunders, Holmes, and Worsley; Drs. Müller and Masters; Rev. W. Wilks, and Rev. G. Henslow, hon. sec.

Hawthorn shoots, dead.—Mr. Saunders reported as follows upon the specimens sent to the last meeting, exhibited by Mr. Wilks:—"The bark of the shoots in places was splitting, and had all the appearance of being attacked by canker, but there was no signs of any fungus on examination with a strong pocket lens; under the bark were several small orange coloured dipterous grubs, belonging to the family Cecidomyiidae. They exactly resembled grubs which I have found feeding on the 'Rose rust,' *Phragmidium subcorticum*, and the 'Bean rust,' *Uromyces fabae*, and I cannot help thinking that they must have fed on some fungoid matter. Their mouths are not suited for feeding on any hard substance, such as Hawthorn shoot, which was practically dead, but what may have caused the death of the shoots I cannot say, but I should suggest that it was of fungoid origin."

Pelargonium leaf striking root.—Mr. Houston also showed a leaf of the Ivy-leaved species, of which the petiole had formed a callus with numerous roots. The effect upon the blade was to enlarge the cells. Mr. Henslow observed that he had read of, but could not recall the reference to, a very similar result occurring with a leaf of Ivy, which, however, became much enlarged.

Acacia armata, seedling.—Mr. Holmes exhibited a specimen having all the leaflets well developed. At a subsequent stage only phyllodes are borne by the tree.

Galls on Beech leaves.—He also showed specimens remarkable for their hairiness, while the leaf of the Beech is perfectly hairless. Mr. Henslow observed that this was a common result in galls on many plants. He had observed it on the smooth-leaved *Erica scoparia*, which bore hairy galls. Woolly terminal buds are common on *Veronica Chamædrys*, the excess of hair being due to an insect. M. Mer, who studied the subject, came to the conclusion that such hairs, as well as those especially on ribs and veins in a normal state, are due to a localised extra nourishment and a compensatory distribution of sap.—("Origin of Plant Structures," page 59.)

Four-spiked Typha.—Dr. Masters showed a specimen in which the stem bore four free terminal inflorescences, but it was not clear whether it was due to cohesion or fasciation.

Root galls.—He also exhibited some globular galls received from Mr. Smith of Newry. Mr. Saunders undertook to examine them.

Fig leaf ascidiform.—He also showed a leaf of some species of *Ficus* growing in the Botanic Garden of Calcutta, in which the basal part formed a hollow cone or funnel-shaped structure. It was exceptional in that it was borne on the under side, and not the upper. Every leaf of the tree was said to be so affected.

Stropharia æruginosa.—Mr. Bunyard sent a specimen of this fungus, which he described as having almost a peacock blue colour when fresh. It was found at Boxley, Kent.

British dye plants.—A communication was also received from Dr. Plowright on this subject, with numerous specimens of dyed wool. The former will appear in the Journal of the Society.

Abies Douglasi seedlings.—Mr. Elwes sent specimens of young trees of this genus, and also of *Larix leptolepis*, about 2 feet high, in a dying state. He observes: "They show a disease which I cannot account for, but is very prevalent in my nursery. The Larches are believed to be raised from Japanese seed. I received plants of the same species from Tortworth Court, Gloucestershire; Hildersley, Yorks; and Dunkeld, Perth; all of which are perfectly healthy in the same soil, situation, and season." The opinion of Mr. Worsley and others was that the death of the plants was due to inferior vigour in the Japanese seeds, and that of Dr. M. C. Cooke was that no fungus was present to account for it.

Yew diseased.—Mr. R. W. Dean of Wainsford, Lymington, sent boughs of Yew attacked by *Sphaerella taxi*. It is a fungus which does but little harm to the trees, as it does not affect the branch, only the green leaves. Lime is probably deficient in the soil.

Horticultural Club.

The usual monthly conversazione and dinner took place on Tuesday last, the 15th inst., at the rooms of the club, Hotel Windsor, and the chair was occupied by the Rev. W. Wilks. There was a good attendance of members, including the Rev. W. Wilks, the Rev. J. H. Pemberton, the Rev. F. R. Burnside, Messrs. Cook, J. Veitch, Geo. Bunyard, C. E. Shea, A. Rivers, J. Walker, G. Pinches, A. H. Pearson, C. E. Pearson, J. Assbee, and H. B. May. The after dinner discussion was on the fruit crop of 1901; it was opened by Mr. G. Bunyard, who said: In reviewing the fruit crop of 1901, I have again to record an unusually dry season, which has considerably lessened the crop of soft fruit, but, on the other hand, has tended to perfect the finest crop of Pears of recent years.

Strawberries at first promised a short yield, but an opportune rain caused the crop to swell out, and they finished well, but the

picking was later than usual. A few sorts were exceptionally fine, such as Latest of All, Filbert Pine, and Queen of Denmark. The older Waterloo, Elton, and Eleanor came in late and good, but the most wonderful crop was from the white varieties, Louis Gauthier, which was (being a dry season) very fine in quality and of abnormal size. Royal Sovereign was well to the fore, and the summer crop of the new autumnal kinds, St. Antoine de Padoue, Jeanne d'Arc, St. Joseph, &c., were very large, and the September and October pickings have been very satisfactory. As far as the market growths are concerned, I believe that prices were satisfactory; in fact, the best paying crop of the year. Raspberries were much affected by the drought, and their low quality may in some measure account for the poor prices that ruled. In gardens they were an average crop. Gooseberries were perhaps the largest crop ever seen, and for both green and ripe fruit the prices were very low. It is not often that all parts grow a crop as they did in 1901, because it frequently happens that a May frost will reduce the yield in some localities to the benefit of those which are more fortunate. Garden Gooseberries were very good in quality, and lasted a longer time than usual. The heaviest crop ever seen was in the Kent Cherry orchards. Such a general glut of these fruits, both black and white, early and late, is rare. The prices were affected by the Strawberry crop not being past when they came on the market. The fruit was naturally rather small, but except at the end, when frequent showers fell, the quality was superb. Though the East Kent growers suffered from a severe gale, a much smaller picking has often brought larger returns. The latter rains have done the trees great good, and we may expect a fair crop in 1902, weather permitting. In Plums, perhaps, never before has this fruit been so unevenly distributed. In some grounds the crop was a full one, while in others trees were very sparsely fruited. The cold weather seems to have come as it were in slices, so that while some escaped others were hard hit. After the large crop of 1900 a full yield was not expected, but apparently, in 1900, the jam boilers filled up, so that the trade has been slow all the season, and for the Kent Damsons a market could not be found.

The Apple crop of 1901 has been a short one, as was expected after the enormous yield of 1900, and the earlier kinds have, as a rule, given the largest return, naturally because the trees have time to recover after the fruit is picked. I anticipate late kitchen Apples will be scarce, as the growers have been tempted by good prices to market them from the trees, and, except the Blenheim Orange, there is but a short crop, although here and there trees are bearing of such old kinds as Winter Queening, Tower of Glammis, and Sourings. Dessert sorts are scarce, Cox's Orange failing in many parts. King of Pippins is a fair crop. Even garden trees on the Paradise stock are bare this season, and it was mostly on two and three years trees that we were able to get our sorts for exhibition. But a notable fact was that trees lifted and planted in 1899 had a grand crop. If this was regularly carried out in private gardens, by lifting a portion each year, I believe a regular crop could be ensured. The varieties which have been conspicuous in the nursery this year are Lady Sudeley, Gladstone, Duchess of Oldenburg, Duchess' Favourite, Allington Pippin, Cockle's Pippin, St. Edmund's Pippin, James Grieve, Baumann's Reinette, King Pippin, Worcester Pearmain; and among the kitchen sorts the early Codlin race, and the new Bielo Borodawaka, Tower of Glammis, Lord Derby, Rambour Papelen, Bismarck, and Lane's Prince Albert in the later varieties.

In Pears the crop has been very satisfactory, and the fruit clean and free from spots; in fact, many second rate sorts have been quite good. Among the newer varieties Marguerite Marillat, Directeur Hardy, and Conference have been superb. Nearly every kind in our nursery has borne this year; among the newer kinds Michaelmas Nelis and Le Lectier, Belle des Arbres, Beurré Perran, Rivers' St. Luke, and St. Martin's are promising keeping sorts, and naturally the late Pears promise to be very fine, as they are well grown and clean fruits. All wall fruits and Figs have been very fine.

Taking 1901 as a whole, and viewing it commercially, I consider it far from satisfactory. The growers, in a word, have done badly. Fine fruit has sold for a song, and it is evident when Plums are selling at 3d. per lb wholesale, and we see them in the fruiterers at 4d. to 8d. per lb, that the profits have gone to others than the growers, and the old vexed question of distribution. The Kent orchards have sold very well, that is, to buyers who gather the fruit themselves. It may be that the demand has not been so brisk as usual, for there is a general complaint of shortness of ready money, and the war may have had some indirect effect, but from the hearty way the large growers are planting, they do not fear that over-production which the pessimists write of, and the keynote of our future fruit production must still be from the best sorts in the best way; cultivate freely, pack carefully, and keep all rubbish at home. I hear that the foreign Plums have not been sent here this season, as prices have ruled low. In conclusion, the copious rains of autumn, and the exceptionally fine and warm weather, should be favourable for the 1902 crop.

An interesting discussion followed. Mr. Assbee attributed the low prices that have ruled in 1901 to certain influences, one being

the now common practice of working men to knock off his luxuries, of which fruit is one, in order to take his family to the sea; also to the increase of fruit culture all over the country, especially in Wisbech, Cambridge, Lincoln, Worcester, &c.; and in reference to the retailer he gave instances which seemed to establish the fact that he equalises his prices without relation to market values, and having a regular trade, he does not find it to his interest to buy largely and sell cheaply, because, while his customers will pay a moderate and regular figure, they resent a rise in prices. It was suggested that the crux of the matter lies rather in the placing of the growers' products on the market in a portable and taking condition as regards colour in fruit. A variety of opinions were expressed, some thinking the dry air was a great factor, others the combined influence of rain, wind, and soil.

Mr. Shea bore out the reader's idea of the erratic action of frost, many trees in his plantations having heavy crops, and others being quite bare. Messrs. Pearson, May, Rivers, the secretary, and others added to the general interest. Rev. W. Wilks mentioned that the continuous application of scientifically prepared manures on Apples had produced no visible effect. A vote of thanks to the reader terminated a pleasant evening.

Birmingham and Midland Counties Gardeners' Association.

Oct. 7, 1901, "A Chat about Hardy Plants," Mr. W. B. Child, The Hardy Plant Nurseries, Acocks Green (this lecture will be illustrated by lantern slides). Oct. 21, "The Propagation of Plants," Mr. C. H. Herbert, The Nurseries, Sparkhill, Birmingham. Nov. 4, "Landscape Gardening," Mr. W. Miller, The Nursery, Berkswell. Nov. 18, Mr. W. Spinks, The Nurseries, Solihull, will open a discussion on the leading features of the Birmingham Chrysanthemum Show. Dec. 2, "The Relationship of Insects to Plants," Mr. A. Jenkins, head gardener to A. W. Wills, Esq., Claregate, Wylde Green. Dec. 16, "A Chat about Conifers," with illustrations of cones, Mr. W. Gardiner, 3, Vivian Road, Harborne (nominations of members for committee for 1902 will also take place at this meeting). Jan. 13, 1902, Presentation of annual report and balance-sheet, and election of committee and officers for 1902 (nominations to take place on Monday evening, Dec. 16).

Bristol and District Gardeners.

On Thursday, October 10, this society held its opening meeting of the session at St. John's Rooms, Redland, Mr. Hancock presiding over a good attendance, the lecturer being Mr. John Kitley, of Alvaston, Derby, who, with a very clear and able paper on climbing plants for inside and outside, gave some very useful information. Mr. Kitley divided his lecture into three sections: (1) stove climbers; (2) those most suited for the cool house and conservatory; and (3) the sorts best adapted for outdoor culture. For the cool house and conservatory, Mr. Kitley gave a selection of climbers which thrive best in a cool atmosphere, such as *Clianthus Dampieri*, *Cobæa scandens*, *Jasmines*, *Tacsonias*, *Plumbagos*, and *Lapagerias*, for the latter plant recommending propagation by layering rather than by cuttings or seed, maintaining that they were much more easily grown in this way, rooting as they will at every joint. The pruning and general treatment was also carefully gone into, as also the most suitable composts for their requirements. Taking his audience imaginarily into the open garden, the lecturer also went into details concerning many useful climbers, which can be used for covering unsightly corners, dead trees, arches, &c., recommending wood trellises, dead trees, and such like rather than wire arches, which, to his mind, were most unsightly in a well-appointed garden. Such plants as the *Clematis*, *Boursault* and *Ayrshire Roses*, including the well known *Crimson Rambler* as being a most desirable Rose for this purpose, and especially for growing against a wall, the *Ampelopsis Veitchii* and *Ivies* of all sorts, and many others. Mr. Kitley also mentioned a few plants, not as climbers, but as being suitable for covering bare walls, &c. Concluding his paper, he strongly advised all lovers of plants to study Nature, which they would find a great help in the cultivation of these most useful of our garden plants. His lecture was much appreciated, and he was unanimously voted the hearty thanks of the society for his practical and interesting observations. Prizes were awarded as follows:—For 6 Apples, Peasgood's Nonesuch; First Lady Cave (gardener, Mr. Poole, F.R.H.S.); second, Mr. Attwell. Four dishes of Plums: First, Lady Cave (gardener, Mr. Poole). 4 dishes of Apples: First, Mr. Attwell; second, Lady Cave (gardener, Mr. Poole). For a collection of Beet: First, Lady Cave (gardener, Mr. Poole); second, Mr. F. Taggart (gardener, Mr. Binfield). 12 Potatoes: First, Mr. F. Taggart (gardener, Mr. Binfield); second, Capt. Jenkins (gardener, Mr. Poston). Certificates of merit went to Mr. A. M. Ross for collection of Pears, to Mr. A. Weedes (gardener, Mr. Ayliffe) for a collection of Michaelmas Daisies, to Mr. Gardner for *Cœlogyne Massangeana*, and to Mr. W. Howell Davis, J.P. (gardener, Mr. Curtis) for *Dendrobium Phalaenopsis Schröderianum*. Mr. F. G. Treseder, F.R.H.S., N.D.S., Cardiff, visits the society on the 24th inst., with a paper on the Dahlia.

Isle of Man Arboricultural Society.

A specially called meeting of the committee of the Isle of Man Arboricultural Society was held at the Court House, Douglas, a little over a week ago, for the purpose of considering the question of the appointment of a forester, whose duty it should be to devote the whole of his time to promoting the work and objects of the society, which are officially stated as follows:—"The encouragement of tree planting; disseminating knowledge in connection therewith; supplying suitable trees at reduced prices; employing the services of skilled workmen, where needed, and generally inducing thorough and continuous planting of trees, especially in waste lands, and places not otherwise in cultivation, thus beautifying and promoting the general good of the Island." Mr. T. W. Creer is secretary to the society.

Cardiff Gardeners' Association.

The second meeting of session took place on Tuesday, October 15, at the Grand Hotel, Mr. F. G. Treseder, F.R.H.S., &c., presiding. Mr. W. J. Sayce, hon. sec. Bee-keepers' Association, Newport, Mon., delivered a lecture entitled "Bee-keeping," illustrated with broods in their various stages of development, also several kinds of hives and other appliances kindly lent for the occasion by Mr. Birt, Newport. The lecturer brought with him an excellent swarm of bees, and special attention was drawn to the queen bee. The practical management of bees was fully explained in detail, commencing from February throughout the various seasons up to the corresponding month the following year. The lecture throughout was full of valuable instruction, and was most fully appreciated, the more so because a Bee-keepers' Association is about to be formed for Cardiff and district, with Mr. Boyce, a local expert, as its chief organiser. A hearty vote of thanks was accorded the lecturer, which terminated the proceedings.

Royal Horticultural Society of Ireland.

The last of the society's flower shows for the present year will be held in the Royal Dublin Society's premises, Ball's Bridge, on Wednesday and Thursday, November 6 and 7 next, viz., the Chrysanthemum and Fruit Show. A unique feature to be introduced into this year's exhibition, and one which should arouse a lively interest amongst the fruit growers of Ireland, will be competitions for Apple packing in barrels, similar to those in which American Apples are imported to the Dublin markets, all particulars of which can be obtained from the secretary, at the office of the society, 5, Molesworth Street. The prizes for these competitions are offered by the Royal Dublin Society, and it is to be hoped that the entries will be such as to warrant the society in not only renewing their offer next year, but largely augmenting it. The holding of this exhibition entails a very heavy expense on the society, more so than any of the other shows, and as the society has lost so heavily for the past two years on this particular show, it is earnestly hoped that more interest may be centred in the coming event, and that the attendance may be fully up to expectations.

Bournemouth Gardeners' Association.

The programme of meetings for the half-year ending Feb. 4, 1902, is as follows:—Sept. 3, 1901, "Cultural Notes on the Primula, Herbaceous Calceolaria, and Sweet Peas," by three members. Oct. 1, "Arrangements in Flowers to Effect Cross-Fertilisation," Mr. W. E. Trevethick, Gaunts House Gardens, Wimborne. Oct. 15, "Choice Annuals suitable for Pot Culture," Mr. H. Slark, Crag Head Gardens. Nov. 5, "Some Hardy Fruits suitable for Bournemouth Soil," Mr. H. Lockyer, Kempsey Gardens (exhibition of vegetables, 6 varieties; prizes, 4s. 6d., 3s. 6d., 2s. 6d.). Nov. 19, "Simple Experiments with Vegetables, Soils, and Manures," A. Key, Esq., M.A., Southampton. Dec. 3, "Gardening Literature and Practice early in the last Century," Mr. J. B. Stevenson, Chine Garden Cottage. Dec. 17, Essay competition, subject, "The Tomato," prizes, 6s. 6d., 5s. 6d., 4s. 6d. (not open to prizewinners in previous competitions). Jan. 7, 1902, Annual supper (date subject to alteration). Jan. 21, "The Advantages of Mutual Improvement Societies," Mr. C. Riddle, Borough Librarian. Feb. 4, Annual meeting. Members are invited to bring specimen plants, &c., to the meetings.

The Hesse and District.

At the fortnightly meeting of the above society, held Tuesday evening, October 15, presided over by J. Stow, Esq., a vice-president of the society, Mr. Jennings, head gardener, Aston Hall, North Ferriby, read a most valuable and instructive paper on "Orchard House Fruit Trees in Pots." The essayist being formerly in the employ of Messrs. Rivers and Son, the well-known fruit growers, dealt with the subject in a very practical manner. He recommended Wallflowers and Hyacinths grown in pots, and placed about the house, which attracted bees, and materially assisted the setting of fruit, aphids and green fly being the worst enemies to contend with, which was easily destroyed by fumigating. Syringing should be done when the trees are growing to keep them clean. Mr. Jennings also advised thinning the fruit of such as Apples, Pears, and Plums; Cherries were advised not to be thinned. He also recommended Thomson's manure as being

safe and effectual to apply, also soot water applied occasionally; also the trees should have a good top-dressing at the time of swelling their fruit. He further mentioned pinching the trees, and if done in a proper manner an equal balanced tree was procured. The time of repotting should be from the second week in October up to Christmas. The operation should be done firmly. Several members took part in the discussion which followed, Mr. Jennings suitably responding. The usual votes of thanks to the chairman and essayist terminated a very profitable and enjoyable evening.

**Fruit Forcing.**

VINES—EARLIEST IN POTS.—To have Grapes ripe in April, the Vines must be started early in November. Success is most certain where there is convenience for affording bottom heat, the canes being sufficiently strong, thoroughly ripened, and duly rested. The materials for affording bottom heat should be in due course of preparation. Two parts Oak or Beech leaves, and one part stable litter, are most suitable, though heat to begin with must not exceed 65 degrees about the pots, augmenting it by bringing up the fermenting materials to the level of the pots by degrees, so as to raise the temperature there to 70 or 75 degrees when the Vines are in leaf. It is a good plan to stand the pots on pillars of loose bricks. Let the Vines be suspended over the fermenting materials in a horizontal position, to induce the buds to break evenly. Sprinkle the canes three times a day, and damp every part of the house at the same time in bright weather. In order to induce regularity of starting, a somewhat higher temperature is necessary at this season, 50 to 55 degrees at night, and 60 to 65 degrees by day, is not too high to begin with in November.

EARLY FORCED PLANTED OUT VINES.—The house, to afford fruit at the end of April or early in May, should be started not later than the middle of November. The outside border must have a covering of leaves, with some litter or fern sloping from the house outwards, and thus throw off some rain, as well as exclude frost. No roots can work in frozen soil. Fermenting material is not indispensable for placing on outside borders, but the warmth is a great aid in keeping the roots active and near the surface. Outside borders, however, are great mistakes for Vines that are forced early year after year.

VINES FOR STARTING IN DECEMBER.—This is the latest date to have the early varieties ripe in May, and Muscats early in June. Prune the Vines directly the leaves have fallen, as it contributes to early and complete rest. In pruning, two buds are mostly sufficient to leave for affording compact bunches of Grapes. Longer pruning may be practised when the Vines are wanted to give fewer and larger bunches of Grapes, for it does not answer to allow as many large bunches on a Vine as of medium sized. Large bunches are, as a rule, loose, irregular in size of berry, and do not finish satisfactorily. Medium sized bunches are more regular in form and size of berry, and finish well. If the eyes at the base of the shoots are not plump, three buds may be left, but this requires frequent renewal of the spurs. Strip the rods of all loose bark, and wash them with a solution of softsoap, 2oz to a gallon of water. Where there has been scale, mealy bug, red spider, or thrips, use a solution of caustic soda and pearlash, 2oz each to 1½ gallon of hot water, applying with a brush at a temperature of 130 to 135 degrees. It kills both hibernating pests and eggs. Thoroughly cleanse the woodwork, and limewash the walls. Remove the surface soil down to the roots, and supply fresh lumpy loam, with a garden potful of bonemeal to each barrowload. A somewhat dry condition of the roots is desirable, yet the border must not be allowed to become parched and cracked, affording water if necessary, but not saturating the soil to the extent of making it sodden. Keep the house cool, admitting air freely, except when frost prevails. If the house is occupied with plants, employ fire heat only to exclude frost.

VINES RIPENING THE WOOD.—Where the Vines are not yet ripe in the wood, the foliage being quite green and the wood nut brown, closely pinch the laterals, and bring them down by degrees to the principal buds, which will have a tendency to promote rest by admitting more light, and restricting the root action, especially if air is admitted freely at night, the house being kept rather warm, but not close by day, as that would have a tendency to induce growth. When growth in the laterals has been checked, the shoots may be shortened to a few leaves above the pruning buds. This will assist the basal buds to plump and the wood to ripen, a genial warmth being kept in the pipes, and air freely admitted.—ST. ALBANS.

The Kitchen Garden.

LIFTING BEET.—Beet may now be carefully lifted and stored in a frost-proof place. The actual drawing of the roots from the ground should be carefully done. Loosen the tap root with a fork, as low as possible, which will allow of the root being readily drawn out. The foliage must not be cut off, but twisted off a few inches above the crown. Lay in a shed to dry, and eventually store in a cool shed between layers of dry ashes or sand. Should much damp soil adhere to the roots, or they are stored in wet material, a growth of rootlets is set up, and leaves also push.

CARROTS AND TURNIPS.—Full grown Carrots and a portion of summer sown Turnips should be lifted and stored. The tops may be removed and the roots well dried before they are stored. Place them in a position where severe frost will not harm them when given a little extra covering. For the present, however, it suffices to place them in layers between dry sand or ashes.

PARSNIPS.—These roots may remain in the ground with advantage. A few may be lifted and stored, however, on the approach of severe frost.

SALSIFY AND SCORZONERA.—The best roots of these may be lifted. Twist off the leaves, like Beet, and store the roots between layers of dry sand or ashes in a shed or dry cellar.

WINTER GREENS.—Remove all yellow and decaying leaves from Brussels Sprouts, Broccoli, Savoys, and Kale. Cauliflowers turning in should be protected from frost by laying or breaking some leaves over the flowers. Hoe between the autumn planted Cabbage, and place out more plants if necessary. Soot is beneficial where slugs abound, and it will also enrich the soil.

CELERY.—Late rows of Celery still remaining unearthed ought to receive the last moulding up if the plants are large enough, making the sides of the ridge moderately steep so as to drain off superfluous water. In very wet and retentive soil, some light material such as ashes should be worked round the plants, finishing the earthing with the ordinary soil.

IMPROVING SOIL.—It is much easier to grow good vegetables, especially in dry periods during summer, when the soil is thoroughly well prepared by deep working. At the present season of the year much ground is vacant after the removal of crops, and an opportunity is afforded of giving special attention to the important matter of deep cultivation. Trenching the ground 2 to 3 feet deep is the best method of effecting the desired improvement, though in some cases it may not be desirable to completely reverse the spits of soil, burying the good surface soil and bringing inert material which may constitute the subsoil to the top. This difficulty may be overcome, however, by the process of bastard trenching, whereby the soil may be thoroughly moved to the required depth, still, however, retaining the various layers in their respective original positions. Not only moving the soil deeply, but freeing it of deep-rooted weeds, is a detail of the work of improvement. Where much of this class of weeds abound the process of clearing is rendered somewhat difficult by the fact that small portions of roots left in the soil are liable to grow, hence it is advisable not to mix manure in such soil, as it will be necessary to fork over the ground again several times if possible and remove as many of the roots as can be found.

BURNING RUBBISH.—All material that will not readily decompose may be disposed of by fire. Pea, Bean, and Potato haulm, Cabbage and Cauliflower stems, hedge clippings, weeds, leaves, long grass, and the prunings of shrubs, rough sweepings and stieks, can all be reduced to ashes. The driest materials must be used to commence the fire, which, when well alight, will take the other refuse. If piled well round and over the fire combustion will be slow, and instead of a rapidly burning fire it will be more of a smother. The materials are thus gradually reduced to ashes and charcoal, and a valuable heap of burnt refuse is secured, which is useful in many ways in the kitchen garden.—LYMINGTON, HANTS.

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary*, Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary*, Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary*, Mr. Brian Wynne, 8, Danes Inn Strand, London, W.C.

South African Fruit Growing.

Competent authorities write to the effect that, "Fruit-growing, especially in the neighbourhood of the larger towns, is capable of extensive development, and it is a noteworthy fact that enormous profits have in the past been realised from this important industry."



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

CARNATION RUST (P. McK.).—This fungus, *Puccinia arenariae*, may be checked by sponging with a rose-red solution of potassium permanganate, or 1oz of the crystals dissolved in 3 gallons of water, or a tablespoonful of Condry's red fluid to a quart of water. It may also be checked by spraying with ammoniacal solution of copper carbonate, made by mixing 4oz of carbonate of copper and 14oz of carbonate of ammonia, and dissolving in hot water (half a pint). When thoroughly dissolved add 4 gallons of cold water. This does not discolour the foliage like dilute Bordeaux mixture, which, however, is effective against the rust. Under the circumstances we advise the rose-red solution of potassium permanganate.

MAGGOTS IN GRAPES (F. W. S.).—You will be interested to know that the fly is that known as the Fever Fly, *Dilophus vulgaris*, it having developed from the pupa. The larvæ, according to Curtis, does much damage in the garden. It attacks Hop eanes in some seasons, but yours is the only recorded instance of its appearing in Grapes. We publish on pp. 384, 385, an account of its attack, with illustrations, by Mr. G. Abbey. Perhaps the flies were attracted by the very indifferent bone dust, and the larvæ found it suitable feeding stuff; but that would not account for the attack on the Grapes. We think it arose from the mulching of manure and the ammonia given off, decay being set up in the Grapes, and the flies simply deposited eggs on the decaying bunches, and the maggots hastened the putrefaction. The treatment you propose is correct, there not being anything like thorough cleanliness and a sweet condition of the border to secure health in Vines.

BARE PATCHES ON LAWN (A. D.).—The bare patches are no doubt due to fungi of the fairy ring (*Marasmius oreades*) class, as you found, on removing a portion of the turf, a compact mass of fungus being brought to view. It is difficult to get rid of the fungus without breaking up the lawn, but much good may be done by the use of lawn manure, not lawn sand, applying 5lb of lawn manure per rod (30½ square yards) now and again in the spring. It should be applied when the grass is dry, but the soil moist, and to ensure an even spreading by hand, it should be mixed previously with a larger bulk of dry earth. If used alone, a large-sized kitchen dredger will insure an even spread. The lawn manure may be had of manure dealers, nurserymen, and horticultural sundriesmen advertising in the *Journal of Horticulture*, or you may apply to Messrs. Richardson, Skeldersgate, York. It should have a guarantee minima of 12 to 15 per cent. ammonia, and 12 to 18 per cent. phosphates. The manure may brown the grass temporarily, but it will soon recover after rain. It will stimulate the finer grasses, discourage daisies and other broad-leaved weeds, and greatly upset the fungi, rendering the lawn even all over in verdure.

DISEASED VIOLET LEAVES (F. C.).—The leaves are infested by the *Viola* mildew, *Peronospora violæ*, which has of late years done considerable injury to the cultivated Neapolitan and its several forms or varieties. It produces large brown spots or patches on the leaf, often involving the whole surface, and is particularly destructive to young leaves. The under side of the leaves is more or less covered with a somewhat dense, dingy, pale violet-grey felt, which under the microscope is seen to consist of conidiophores and bearing spores or conidia, and later on the resting spores (oospores) are formed in the dying parts of the leaf. The fungus is most abundant in damp weather, and on plants in frames, and damp with the placing of the plants close together, as is the common practice, is greatly conducive of the disease. The best means of combating the fungus is removing all affected leaves as they appear, and burning them, admitting air freely on all favourable occasions, even tilting the lights when the weather is wet, so as to promote a circulation of air. In addition to this, the plants may be dusted occasionally with air-slaked lime. We have also found dusting with charcoal broken up small very useful, as it to a certain extent renders the atmosphere sweet, and prevents damp. With the foregoing attended to, we have not found it necessary to have recourse to fungicides, for with plenty of air and not too much water the fungus is retarded in spreading.

QUERY.—"Can anyone tell us who employs motor cars or waggons successfully for conveying Strawberries, Tomatoes, and such perishable soft produce direct to Covent Garden Market? A speed of eight miles per hour is said to be made, and the cost for about sixteen miles' return trip is about 5s. 3d. The saving of time is also found to be most valuable."

MAKING MUSHROOM BEDS ON GROUND THAT THE MANURE HAS BEEN PREPARED ON (G. T. O. B.).—There is really no objection to make up the beds on the same ground the manure has been prepared on, we having practised it for many years, and the site of the old beds can be re-occupied indefinitely. This applies to both outdoor and indoor beds.

GARDENERS' RIGHTS ON LEAVING SITUATIONS (Henri).—(1) If you have received notice to leave at once without having committed disobedience or gross neglect of duty, you are entitled to a month's wages, to a month's house rent, to value of garden produce, and all advantages "in kind" which it was clearly agreed should form part of your remuneration, though not expressed as wages. (2) Unless agreed upon *beforehand* in writing, it is extremely unlikely that any employé will recover from his employer his travelling expenses incurred in reaching his situation. Even a subsequent promise of the employer would be only in the nature of a bare promise, or debt of honour.

TOP-DRESSING ASPARAGUS BEDS WITH KAINIT (Idem).—There being lime in the soil, without which it would not be fertile, does not militate against the use of kainit, for the large percentage of salt (chloride of soda) it contains will be indirectly useful, even on limestone soils, and on land to which lime has been applied, by exchanging acids with the lime and forming muriate of lime, which, in its turn, combines readily in the soil with the ammonia, some of which might otherwise have been volatilised as carbonate. Besides, salt is well known as directly useful to Asparagus, and potash one of its chief components, as shown by analysis of the ashes of the plant. We do not know where "wattle hurdles" are to be procured. Perhaps some correspondent may be able to supply the desired information.

PRUNING HYDRANGEAS (Regular Reader).—The pruning may not have had anything to do with the plants flowering unsatisfactorily, as the flowering depends on well matured, sturdy growths, and the formation of plump buds. We should rest the plants during the winter, not keeping so dry as to cause the wood to shrivel, and when the buds are commencing to swell cut out the weaker and least promising wood, shortening the flowered parts to plump buds, and leaving the last year's growth entire. On this principle the finest plants we have ever seen were grown this year by an amateur. It would hardly do to cut the roots in half and repot into the same sized pot, for pot-bound plants really require a larger size, and should be given to secure well-flowered specimens. However, if you reduce the heads, the soil may be removed about an inch all round the ball and under it, cutting off any straggling roots, and repotting into the same size pot. This should be done just before or when the buds commence swelling.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. A number of replies are necessarily held over till next week.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. T.).—1, *Rondeletia speciosa*; 2, *Ravenia spectabilis*; 3, *Cupressus Lawsoniana*. (Reader).—1, *Adiantum trapeziforme*; 2, *Cattleya aurea*. (F. Reid).—*Acacia alata*, figured on page 353. (J. Cowper).—*Iris foetidissima*. (D. R.).—Next week without fail; must compare with growing specimens, and so far our editorial duties have quite absorbed our time. (A. A.).—1, *Lycasteria formosa*; 2, *Polygonum orientale*; 3, *Helianthus orgyalis*. (R. G.).—No. 2 was *Adiantum æthiopicum*, not *A. Faulkneri*.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Trade Catalogues Received.

J. Cheal & Sons, Lowfield Nurseries, Crawley, Sussex.—*Ornamental Trees and Shrubs, Fruit Trees, Forest Trees, Rhododendrons, &c.*
Dicksons, Chester.—*Catalogue of General Nursery Stock.*
Hudson, Hudson's Bulb Depot, 34, Chiswick High Road, London, W.—*Bulbs and Hardy Lilies.*
Chas. Turner, The Royal Nurseries, Slough.—*Fruit Trees, Conifera, Ornamental Trees, Shrubs, Climbing Plants, &c.*
W. Wells & Co., Earlswood Nurseries, Redhill, Surrey.—*Descriptive List of Chrysanthemums for 1901-1902.*

Covent Garden Market.—October 23rd.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Melons, each	0 9	to 1 0
" dessert	3 0	6 0	Pears, English, $\frac{1}{2}$ sieve	2 0	6 0
Bananas	8 0	12 0	Pears, French, crate	4 0	9 0
Cobnuts, lb.	0 8	0 9	Pines, St. Michael's,		
Figs, green, doz.	1 6	2 0	each	3 0	4 6
Grapes, Hamburgh, lb.	0 6	1 0	Plums, $\frac{1}{2}$ sieve	2 0	3 0
" Muscat	1 0	2 6	Walnuts, $\frac{1}{2}$ sieve	2 0	3 0
Lemons, Naples, case	24 0	30 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Horseradish, bunch	1 0	to 0 0
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1	$\frac{1}{2}$ 0 2
Batavia, doz.	2 0	0 0	Lettuce, Cos, doz.	1 0	2 0
Beans, French, bushel	1 0	2 0	Mushrooms, forced, lb.	0 8	0 9
Beet, red, doz.	0 6	0 0	Mustard & Cress, pint.	0 2	0 0
Brussels Sprouts, $\frac{1}{2}$ sieve	2 0	2 3	Parsley, doz. bunchs	2 0	5 0
Cabbages, tally	1 6	3 0	Potatoes, English, ewt.	3 0	5 0
Carrots, new, doz. bunch.	3 0	7 0	Radishes, doz.	0 6	0 9
Cauliflower, tally	6 0	8 0	Shallots, lb.	0 2	0 3
Corn Salad, strike	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	2 0	3 0	Tomatoes, English, lb.	0 2	0 2 $\frac{1}{2}$
Endive, doz.	1 0	1 3	Turnips, doz. bunch.	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Ficus elastica, doz.	9 0	to 12 0
Araucaria, doz.	12 0	30 0	Foliage plants, var, each	1 0	5 0
Aspidistra, doz.	18 0	36 0	Lycopodiums, doz.	3 0	0 0
Chrysanthemums, doz.	6 0	30 0	Marguerite Daisy, doz.	6 0	8 0
Crotons, doz.	18 0	30 0	Myrtles, doz.	6 0	9 0
Draena, var., doz.	12 0	30 0	Palms, in var., doz.	15 0	30 0
Draena, viridis, doz.	9 0	18 0	" specimens	21 0	63 0
Erica gracilis, doz.	10 0	12 0	Primulas	3 0	4 0
" cafra, doz.	15 0	18 0	Shrubs, in pots	4 0	6 0
Ferns, var, doz.	4 0	18 0	Solanums	8 0	10 0
" small, 100...	10 0	16 0			

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Asparagus, Fern, bunch.	1 0	to 2 0	Mignonette, English,		
Carnations, 12 blooms	1 0	1 3	doz.	0 9	to 1 6
Cattleyas, doz.	12 0	18 0	Marguerites, white,		
Chrysanthemums,			doz. bunchs.	1 0	2 0
specimen blooms,			" yellow, doz. bunchs.	0 6	1 0
doz.	1 0	4 0	Odontoglossums	4 0	5 0
" white, doz. bunchs.	2 0	4 0	Roses, Niphetos, white,		
" coloured, doz. bunchs.	2 0	3 0	doz.	1 0	2 0
Eucharis, doz.	1 6	2 0	" pink, doz.	1 0	3 0
Gardenias, doz.	1 6	2 0	" yellow, doz. (Perles)	1 0	1 6
Geranium, scarlet, doz.			" red, doz.	0 6	1 0
bunchs.	3 0	4 0	Smilax, bunch	1 0	2 6
Lilium lancifolium alb.	1 6	2 0	Stephanotis, doz.	3 0	0 0
" rubrum	1 3	1 6	Stock, white, doz. bunchs	1 6	2 0
" longiflorum	3 0	4 0	" coloured, doz. bunchs	3 0	0 0
Lily of the Valley, 12			Tuberoses, gross	4 0	5 0
bunchs	12 0	18 0	Violets, single, doz.	1 0	1 6
Maidenhair Fern, doz.			" double, doz.	3 0	4 0
bunchs.	3 0	4 0			



Mr. Haggard and Changes in Farm Practice.

At last we have Mr. Haggard's summary of his tour of inspection of British farming and the conclusions which he has deduced therefrom. That he has arrived at a true estimate of the present state of agriculture in this country few will deny. It is notorious and patent to anyone who lives in the country with open eyes, that only where the land is cultivated by small holders is there anything like an adequate supply of labour. The farm labourer is tired of working without a monetary interest in his labour, and failing it, he goes to the town, where, at any rate, he has more amusement during his leisure hours.

That in two points Mr. Haggard has hit the nail on the head we are ready to agree. Small holdings, which lend themselves to

the production of eggs, butter, and milk, are an obvious necessity to our rapidly increasing urban population. That agricultural banks must greatly aid the creation, or rather multiplication, of small holdings is equally clear. The critic may argue that money is cheap, and, for anything like a reasonable security, easily obtainable. But the small farmer's business is too small for the present-day banker to take much account of, and failing the personal assistance of a friend or neighbour, the struggling man is too liable to fall a prey to the seductions of the 60 per cent. money-lender. That direct neighbourly help may be denied for lack of confidence, but granted through an intermediary, is proved by a case Mr. Haggard refers to, but possibly with only partial knowledge of the facts. If one member of a family will lend money to the bank at 3 per cent. which another member of the same family borrows from the bank at 6 per cent., is there not a useful field of operation for these agricultural banks? We know that in the case mentioned, a direct loan was refused, and could not have been effected.

One solemn fact is apparent to all. Strict adherence to the four-course system is a thing of the past. Few tenants will now take farms under the old restrictions, and we do not blame them. The farming puzzle is difficult enough without encountering any unnecessary impediments. On light and thin lands, which do not readily lend themselves to the methods of the small dairy farmer or are in too isolated a position or deficient in building accommodation, the natural tendency is to revert to something akin to the sheep run. On the other hand, where the soil is fertile and near to markets, the question of buildings is no difficulty, but from many quarters we hear reports of the cutting up of large holdings and the creation of small ones, the buildings being partly provided by the landlord and partly by the tenant, under the Compensation Act.

If Mr. Haggard is right, and we see no reason to doubt that he is, the farmer of 250 to 600 acres will slowly but surely become an extinct species, and the land, which is not well situated or good enough for intense cultivation and the smaller agricultural industries, will be farmed in big blocks, by the moneyed monopolist who can make the best use of machinery and economic labour. In his summary Mr. Haggard lays special stress on the lack of rural labour almost throughout the country. To bring labour back to the land we must give the labourer a direct interest in it, and for this reason, if for no other, we should encourage the creation of small farms. We can vouch for the truth of the statement that the labour trouble is most acute where the whole of the land is farmed in large blocks. Small farmers are always willing to give manual help to the bigger man, who can give them valuable assistance with his teams in return.

We see that "Mr. Punch" has a fine cartoon on this question of rural depopulation, in which the exodus appears to be attributed to the superior attractions of town rather than any special drawbacks of the country. A Yorkshire County Court Judge, however, is of opinion that the conditions of country labour have a good deal to do with the matter. He is reported to have said that "There were no labourers in the country-side, and the case before him showed what a serious thing these yearly engagements were. When a man got into a place, and there were circumstances which did not suit him, he had to serve the complete year without any chance of getting away. It was not likely he would serve under those conditions if he could get an appointment in a town where he could serve by the hour and go away when he liked." There is much truth in this, for the great scarcity lies amongst the yearly unmarried men, who feed horses and go to plough whilst boarding with the farmer or his foreman. There is an increasing tendency to cut the term of service down to six months, and the men are much more exacting as to the terms on which they will hire themselves. The farmer who goes to hirings nowadays has often to endure a most searching cross-examination as to the age, size, and value of his horses, the amount of Corn that is allowed them, the hours of work, the food and beer for the men, the hours for retiring to bed and rising, &c., &c., and is obliged to go through it, looking pleasant and good humoured if he wishes to get any men.

That farmers will fight hard against breaking through the old customs, especially the engagement of yearly men, is but natural, for none but farmers can realise the inconvenience of losing men at short notice. As a rule, married labourers like long terms of service, as they do not like moving about when they have a fair place and a good cottage. Farmers have become much more ready to hire men on these terms since the single men have become so masterful and difficult to deal with. This district was considered by Mr. Haggard to be highly favoured, and one of the few prosperous ones he found in his travels, but disappointing yields and drooping markets are having a very depressing effect,

so that notices to quit farms have been handed in to the estate offices in large numbers during the past fortnight. Will Mr. Haggard's appeals to the Government have any effect? They might if the men in office had not their hands so full of other business.

Work on the Home Farm.

The weather is still fine, but the very heavy dews and fogs have been almost as beneficial as rain would have been to the roots. Swedes are still improving, and there is a decided improvement in the demand for sheep. The shortage in the numbers as shown by the agricultural returns may have an influence on this demand, as it may be encouraging speculation on the part of graziers. The lambs are doing well, and cleaning up the early Turnips at a rapid pace. A great many of these roots are rotten and of little value. Mangolds are likely to be immense. To-day we have seen some men at work storing them. Too early, we think. Why not get all the size possible and all the weight besides? they may not keep well if stored before they are ripe. Very few Potatoes are now in the ground, and the land is already being drilled with Wheat. Many farmers are ploughing seeds which turn up fairly well, but the land is very dry, and some seem to doubt whether there is enough moisture for the Wheat to germinate in. The roll is following quickly after the ploughs, and very little harrowing is needed.

With Wheat down at 26s., several fields which would have been drilled are being kept unploughed to be grazed until February, and then sown with Barley. Much threshing has been done, and there is little but disappointment to chronicle. Even Wheat is not so good as the earlier threshings promised. Barley is very uneven. The best crops, which promised six quarters, are coming out little if anything over five, but the fair-size commands about 30s. per quarter, which will do. The lighter crops from drier soil are in few cases exceeding three quarters, and the price, 23s. to 24s., makes matters worse. Markets are glutted, and buyers are having matters all their own way. The same thing applies to Potatoes, which are down to 40s. The finest quality ever grown at 3d. per 14lb.!! What will the consumer have to pay?

The farmer's wife is grumbling, for it has been a light dairy this year, and poultry is very cheap. Plenty of fair-sized fowls may be purchased at 1s. 6d. each. No wonder, when such myriads of pheasants are reared; and they are shot much earlier than they were, and at a season when they will not keep. The other day we were shown a photograph of 8,000 pheasants running about in one field. We are getting very few eggs, many of the hens being in a dilapidated state of moulting. We see chemical food recommended to be given in the water as an assistance over this trying stage. Why not give milk? If a supply of skim-milk be available, an allowance mixed with the drinking water would help wonderfully to bring the birds into good condition.

RAINS IN S. AUSTRALIA.—The State Agent for South Australia has received a telegram from his Government stating that further splendid rains have fallen throughout the colony, and that harvest prospects for the coming season are considerably improved.

BARBED WIRE IN CHESHIRE.—The Duke of Westminster, speaking at the Cheshire Dairy Show last week, said he would offer prizes of £20 and £10 next year for the most successful farmer who had no barbed wire on his land, and he hoped that if any of his tenants used barbed wire it would all be removed by next week.

BISHOP AS AGRICULTURIST.—The Bishop of Peterborough (Dr. Carr-Glynn) has been turning his knowledge of agriculture to account. Recently his head gardener fell ill, and his lordship, unable to get the grass in the palace grounds properly cut, forthwith ordered about thirty sheep to be bought in the local market and put to pasture. After three weeks' grazing the sheep cleared the episcopal park as clean as if it had been cut with a grass mower. This work accomplished, the bishop sent his flock back to market and sold them at a profit of 3s. a head.

BRACKEN AS LITTER.—There has been considerable correspondence in the "Field" lately concerning the value of bracken fern as litter for live stock, and the broad result is to show that for this purpose, whether regarded from the comfort point of view or in a manurial sense, few materials are equally suitable. Investigations have proved that dried bracken is especially valuable as an ingredient in the manure heap, but it is to the remarks of the latest contributor to the discussion that we wish particularly to refer. According to this writer, it is believed by many that animals littered with bracken are safe from the attacks of insect pests, and he mentions in support of this belief the experiences of certain kennel huntsmen who long used it for foxhounds. If it really possesses this peculiar virtue, bracken is likely to become a favourite material for littering other kinds of animals besides dogs.

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in 12 choice named varieties ... 5/6, 7/6, and 10/6
in 25 " " " ... 10/6 and 15/-
in 50 " " " ... 21/- and 30/-

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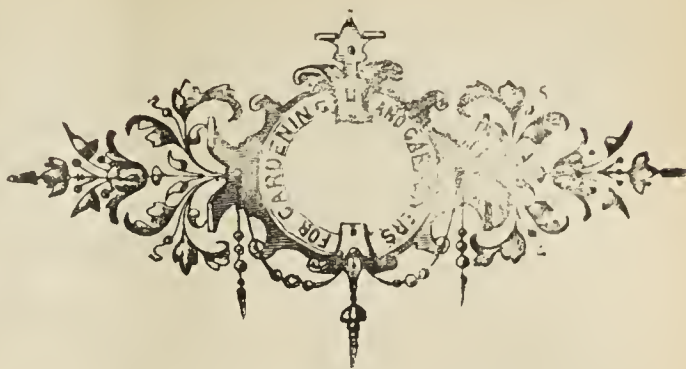
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	Per 100.	Per 1000.		Per 100.	Per 1000.
	s. d.	s. d.		s. d.	s. d.
Hyacinths, in the finest mixture, for bedding or forcing	11 0	105 0	Dahlias, Single, in the finest mixture	8 4	—
Hyacinths, Single, first size, named, in several leading sorts, red, white, and blue varieties, equal quantities, my selection	20 0	—	Anemone, Single, mixed	1 4	12 6
Tulips, Single early, in the finest mixture	1 10	16 8	Anemone, The Bride, pure white	1 8	15 0
Tulips, Double early, very fine mixed	2 2	20 0	Anemone apennine (blue Wood Anemone)	3 0	25 0
Tulips, Single Duc van Thol, mixed, for forcing	2 6	20 0	Anemone apennine (white Wood Anemone)	5 0	—
Tulips, Duc van Thol, scarlet-red	2 6	20 0	Anemone nemorosa (double White Wood Anemone)	6 0	—
Tulips, La Candeur, double white	3 4	30 0	Anemone japonica alba, pure white	4 0	—
Tulips, Single La Reine, rose-white	2 0	18 4	Dielytra spectabilis, red (Bleeding Heart)	12 6	—
Paraxis, very fine, mixed	0 8	6 0	Funkias, in the finest mixture	10 0	—
Fritteleia uniflora, pure white, very fragrant	1 6	—	Narcis.-Polyanthus, in the finest mixture	4 0	38 0
Narcis, in the finest mixture	0 6	5 0	Narcis., Double, mixed	3 6	30 0
Proculus, first size, in the finest mixture	0 10	8 0	Narcis., Single, mixed	1 4	12 6
Proculus, second size, in the finest mixture	0 5	4 0	Narcis., Trumpet, mixed	2 6	20 0
Proculus, yellow, third size	0 6	4 2	Narcis., Campenelle, pure yellow	1 2	10 0
Spanish Iris, in the finest mixture	0 7	5 0	Ranunculus, French, mixed	1 0	9 0
Iris Kämpferi (Japan Iris), mixed	5 0	40 0	Ranunculus, Persian, mixed	1 0	9 0
Iris sibirica, very fine, mixed	4 0	40 0	Snowdrops, Elwesi, Giant Snowdrop	1 6	13 0
Montbretia crocosmæflora, orange-scarlet	1 6	—	Gladiolus, Marie Lemoine, cream	2 6	—
Montbretia, very fine, mixed	5 0	—	Gladiolus Brechleyensis, scarlet-red	2 6	20 0
			Gladiolus Colvillei alba, pure white	2	10 10
			Azalea ponticum, each, 10d. to 1/8.		

250 Bulbs of the same kind will be charged at the 1000 rate; 25 at the price per 100; 6 at the price per 12.

Collection D.—For Spring Garden, containing 1330 Bulbs, £1 1/- Half of this, 11/-.

Collection B.—For Indoor, containing 629 Bulbs for 92 pots or glasses, £1 1/- Half of this, 11/-.



Journal of Horticulture

THURSDAY, OCTOBER 31, 1901.

Rose Analysis, 1895-1901.

ALTHOUGH this analysis has now appeared in the *Journal of Horticulture* year by year for the last sixteen years, it may be advisable for the sake of those who come across it now for the first time to briefly explain once more the method adopted in its compilation, and the materials upon which it is based. Since 1886 the name of every Rose in all the prize stands at the National Rose Society's metropolitan exhibition have been taken down, and the results afterwards tabulated. The average number of blooms thus dealt with annually has been about 1800. In the complete table for the whole sixteen years can be found the number of times any variety was staged at all or any of those sixteen exhibitions. This table is often of great service for reference, but in the present analysis the positions of the different varieties which will allow of this being done—and they form more than 80 per cent. of the varieties appearing in the table of Hybrid Perpetuals and Hybrid Teas, and that of Teas and Noisettes—are made dependent upon their average records for the last eight years only, it having been found in practice that a period of seven or eight years gives the most trustworthy and comparable results. From 1886-87 the National Rose Society's metropolitan exhibition was held at South Kensington, from 1888-1900 at the Crystal Palace, and for the first time this year in the Temple Gardens.

The poor form displayed this year by Mrs. John Laing, usually one of the most dependable of all Roses, has been a matter for remark and surprise amongst rosarians generally. The number of flowers of this fine variety staged at the Temple Rose Show was not much below the average, but the

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blooms themselves were, as a rule, of indifferent quality. It is not, however, so much to this year's indifferent form of Mrs. John Laing that I now wish to direct attention as to the likelihood, amounting almost to a certainty, that in a few years' time, if not next year, it will no longer head the list of Hybrid Perpetuals and Hybrid Teas. For nine consecu-

tive years this grand H.P. has occupied virtually unchallenged the premier place in the table, but in the present analysis the splendid record of a new H.T., Bessie Brown, makes it highly probable that that variety will shortly take its place. This year, Bessie Brown, although only now beginning to be grown by many exhibitors, was to be met with

HYBRID PERPETUALS AND HYBRID TEAS.

Position in Present Analysis.	Average Number of Times Shown.	No. of Times shown in 1901 in True Relative Proportion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	47.6	45	Mrs. John Laing	1887	Bennett	Rosy pink
*2	43.0	43	Bessie Brown (H.T.)	1899	A. Dickson & Sons ..	Creamy white
3	40.4	43	Ulrich Brunner	1881	Levet	Cherry red
4	36.0	33	Caroline Testout (H.T.)	1890	Pernet & Ducher....	Light salmon pink
5	33.5	25	Mrs. W. J. Grant (H.T.)	1895	A. Dickson & Sons ..	Bright rosy pink
6	32.4	34	A. K. Williams	1877	Schwartz	Bright carmine red
6	32.4	46	Her Majesty	1885	Bennett	Pale rose
8	32.0	22	Mrs. R. G. Sharman-Crawford	1894	A. Dickson & Sons ..	Clear rosy pink
9	31.7	24	Marquise Litta (H.T.)	1893	Pernet & Ducher....	Carmine rose, brighter centre
10	31.5	35	Kaiserin Augusta Victoria (H.T.) ..	1891	Lambert & Reiter ..	Cream, shaded lemon
11	28.8	29	La France (H.T.)	1867	Guillot	Silvery rose, shaded lilac
12	28.0	27	Gustave Piganeau	1889	Pernet & Ducher....	Shaded carmine
13	26.9	15	Suzanne M. Rodocanachi	1883	Lévêque.....	Glowing rose
14	26.0	22	Captain Hayward	1893	Bennett	Scarlet crimson
15	24.6	23	Madame Gabriel Luizet	1877	Liabaud.....	Light silvery pink
16	22.3	23	Alfred Colomb	1865	Lacharme	Bright carmine red
17	21.9	15	Marie Baumann	1863	Baumann	Soft carmine red
18	21.6	25	Marchioness of Londonderry	1893	A. Dickson & Sons ..	Ivory white
19	21.4	23	Horace Vernet	1866	Guillot	Scarlet crimson, dark shaded
20	18.0	17	Earl of Dufferin	1887	A. Dickson & Sons ..	Dark crimson, shaded maroon
21	17.3	14	François Michelon	1871	Levet	Deep rose, reverse silvery
21	17.3	9	He'len Keller.....	1895	A. Dickson & Sons ..	Rosy cerise
23	16.9	18	Prince Arthur	1875	B. R. Cant	Bright crimson
24	16.6	18	Dupuy Jamain	1868	Jamain	Bright cerise
25	16.5	14	Charles Lefebvre.....	1861	Lacharme	Purplish crimson
26	16.4	6	Margaret Dickson	1891	A. Dickson & Sons ..	Ivory white
27	15.3	12	Etienne Levet	1871	Levet	Carmine rose
*28	14.0	14	Ulster	1899	A. Dickson & Sons ..	Salmon pink
29	13.8	9	White Lady (H.T.).....	1890	W. Paul & Son	Creamy white
30	13.7	9	Tom Wood	1896	A. Dickson & Sons ..	Brownish red
31	13.6	14	Fisher Holmes.....	1865	E. Verdier.....	Shaded crimson scarlet
32	13.5	5	Duke of Wellington	1864	Granger	Bright shaded crimson
33	13.0	14	Killarney (H.T.)	1898	A. Dickson & Sons ..	Pale pink, shaded white
33	13.0	7	Victor Hugo.....	1884	Schwartz	Dazzling crimson, shaded
35	12.6	7	Marchioness of Dufferin	1891	A. Dickson & Sons ..	Pink
36	12.5	17	Comte de Raimbaud	1868	Roland	Clear crimson
37	12.2	6	Marchioness of Downshire	1894	A. Dickson & Sons ..	Light pink, shaded rose
38	12.1	7	Merveille de Lyon	1882	Pernet	White
39	12.0	10	Countess of Caledon (H.T.)	1897	A. Dickson & Sons ..	Carmine rose
40	11.6	6	Lady Mary Fitzwilliam (H.T.)	1882	Bennett	Rosy flesh
41	10.9	8	Général Jacqueminot	1853	Roussel	Bright scarlet crimson
41	10.9	6	Louis Van Houtte	1869	Lacharme	Deep crimson, shaded maroon
43	10.8	8	Duke of Edinburgh	1868	Paul & Son	Scarlet
44	9.9	3	Heinrich Schultheis ..	1882	Bennett	Pinkish rose
45	9.7	6	Marie Verdier	1877	E. Verdier.....	Pure rose
46	9.6	3	Baroness Rothschild	1867	Pernet	Light pink
46	9.6	6	Dr. Andry.....	1864	E. Verdier.....	Bright crimson
48	9.4	6	Xavier Olibo.....	1864	Lacharme.....	Dark velvety crimson
49	9.3	5	E. Y. Teas	1874	E. Verdier.....	Bright red
50	8.8	5	Duchesse de Morny	1863	E. Verdier.....	Silvery rose
51	8.6	6	Jeannie Dickson	1890	A. Dickson & Sons ..	Soft silvery rose
52	8.4	6	Duchess of Bedford	1879	Postans	Light scarlet crimson
53	8.3	7	Ferdinand de Lesseps	1869	E. Verdier.....	Shaded crimson
54	8.1	9	Madame Eugène Verdier	1878	E. Verdier....	Silvery rose
55	8.0	10	Beauty of Waltham	1862	W. Paul & Son.....	Rosy crimson
56	7.8	5	Camille Bernardin.....	1865	Gautreau	Light crimson
57	7.5	2	Abel Carrière	1875	E. Verdier.....	Crimson maroon, shaded purple
57	7.5	11	Duke of Teck	1880	Paul & Son	Light crimson scarlet
59	6.8	3	Star of Waltham.....	1875	W. Paul & Son	Carmine, shaded violet
60	6.1	6	Duke of Fife	1892	Cocker	Deep crimson scarlet
61	5.9	5	Le Havre	1871	Eude	Vermilion red
62	5.8	2	Marie Finger	1873	Raimbaud	Light salmon rose
63	5.6	2	Charles Darwin	1879	Laxton	Brownish crimson
63	5.6	3	Pride of Waltham	1881	W. Paul & Son	Salmon pink, shaded
65	5.5	5	Comtesse d' Oxford	1869	Guillot	Carmine violet
66	5.3	5	Marie Rady	1865	Fontaine	Brilliant red

*New varieties, whose positions are dependent on their records for the 1901 show only.

in only two fewer stands than Mrs John Laing, which has been in general cultivation for the last ten years.

Among other established varieties which were poorly represented may be mentioned Caroline Testout, Mrs. W. J. Grant, Mrs. R. G. Sharman-Crawford, Marquise Litta, Suzanne M. Rodocanachi, Captain Hayward, and Helen Keller, all of which were this year staged less frequently than at any previous metropolitan exhibition of the National Rose Society since they were first generally grown by exhibitors, while Marie Baumann has only once before appeared in as few stands.

On the other hand, Her Majesty (very appropriately, considering the visit paid to the show this year by the society's patroness, her Majesty the Queen) was staged no fewer than forty-six times, or a greater number than any other Rose in the exhibition, except Maman Cochet. It was also a record year for Kaiserin Augusta Victoria and Comte de Raimbaud. Marchioness of Londonderry and Duke of Teck were also exceptionally well represented. That the past Rose season was an unusually early one is shown by the fact that such late flowering sorts as Her Majesty and Marchioness of Londonderry were so numerous staged.

For the third year in succession all the Roses in the table of H.P.'s and H.T.'s which are five or less years old—that is to say, the newer Roses—are of British origin, and raised exclusively by one firm, Messrs. A. Dickson and Sons, of Newtownards, Ireland. The only 1896 variety on the list is Tom Wood (No. 30), and this has rather lost than gained ground since the last analysis was issued, and the same may be said of Countess of Caledon (No. 39), distributed in

1897. On the other hand, Killarney, sent out in 1898, has risen from No. 40 to No. 33. It is a most charming pale pink Hybrid Tea, and possesses the rare quality of being not only a good exhibition Rose but also an equally good garden Rose. The two 1899 varieties are Bessie Brown (No. 2) and Ulster (No. 28). The former has already taken the exhibition world by storm. The fact is, it supplies a want long felt in this section, and that is a really high-class white, or creamy white, H.P. or H.T. It is not only unsurpassed as an exhibition Hybrid Tea, but, as before stated, is likely in a short time to occupy the premier position in the list in which both Hybrid Perpetuals and Hybrid Teas are included. Ulster has also made an excellent start, for last year it did not appear in the table at all, and now, on its first appearance, takes its place at No. 28, a very good position indeed, considering how recently it has been sent out.

The progress that is being made in this section is shown in two ways: (1), By the smaller records in recent years made by such established favourites as Marie Baumann, Charles Lefebvre, Etienne Levet, and Merveille de Lyon; (2), By the high positions taken by the comparatively new varieties. For instance, the average age of the first twelve Roses in the table five years ago was twenty-four years, whereas in the present analysis the leading twelve sorts only average fourteen years. Another striking feature is the prominent position taken by that comparatively new race, the Hybrid Teas, six of the first twelve Roses on the list belonging to that now popular section. Taking the Hybrid Perpetuals alone, the advance is by no means as encouraging. This is, I think, to be regretted, for after all there are no crimson Roses in any other section which can

TEAS AND NOISETTES.

Position in Present Analysis.	Average Number of Times Shown.	No. of Times Shown in 1901 in True Relative Proportion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	47.7	61	Maman Cochet.....	1893	Cochet	Deep flesh, suffused light rose
*2	43.0	43	White Maman Cochet	1897	Cook	White, tinged lemon
3	39.5	39	The Bride	1885	May	White, tinged lemon
4	38.5	33	Catherine Mermet	1869	Guillot	Light rosy flesh
5	33.8	40	Comtesse de Nadaillac	1871	Guillot	Peach, shaded apricot
6	32.9	40	Innocente Pirola	1878	Madame Ducher	Creamy white
7	28.9	22	Souvenir de S. A. Prince	1889	Prince	Pure white
8	28.5	31	Madame Cusin.....	1881	Guillot	Violet rose, yellow base
9	28.3	24	Bridesmaid	1893	May	Bright pink
10	26.5	20	Madame Hoste.....	1887	Guillot	Pale lemon yellow
11	25.5	27	Muriel Grahame	1896	A. Dickson & Sons ..	Pale cream, flushed rose
12	24.9	18	Souvenir d'un Ami	1846	Belot-Defougère	Pale rose
13	23.4	23	Souvenir d'Elise Vardon	1854	Marest	Cream, tinted rose
14	22.8	16	Madame de Watteville	1883	Guillot	Cream, bordered rose
*15	22.0	22	Mrs. Edward Mawley	1899	A. Dickson & Sons ..	Pink, tinted carmine
16	20.6	25	Maréchal Niel (N.)	1864	Pradel	Deep bright golden yellow
17	20.3	18	Ernest Metz.....	1888	Guillot	Salmon, tinted rose
18	20.2	18	Medea.. ..	1891	W. Paul & Son	Lemon yellow
19	19.8	6	Marie Van Houtte	1871	Ducher	Lemon yellow, edged rose
20	16.4	10	Niphetos	1844	Bougère	White
21	15.4	5	Honourable Edith Gifford	1882	Guillot	White, centre flesh
22	15.3	15	Caroline Kuster (N.).....	1872	Pernet	Lemon yellow
23	13.0	12	Cleopatra	1889	Bennett	Creamy flesh, shaded rose
24	12.9	12	Princess of Wales	1882	Bennett	Rosy yellow
25	12.5	0	Anna Olivier	1872	Ducher	Pale buff, flushed
26	11.9	12	Ethel Brownlow	1887	A. Dickson & Sons ..	Rosy flesh, shaded yellow
27	10.7	7	Golden Gate	1892	Dingee & Conard....	Creamy white, tinted rose
28	9.9	5	Francisca Krüger	1879	Nabonnand	Coppery yellow, shaded peach
29	9.1	4	Rubens	1859	Robért	White, shaded creamy rose
30	8.9	4	Jean Ducher.....	1 74	Madame Ducher	Salmon yellow, shaded peach
31	6.3	7	Madame Bravy	1848	Guillot	White, flushed pink
32	5.3	1	Etoile de Lyon.....	1881	Guillot	Deep lemon

* New varieties, whose positions are dependent on their records for the 1901 show only.

for a moment be placed on the same level with such grand creations as A. K. Williams, Suzanne M. Rodocanachi, Alfred Colomb, Horace Vernet, Charles Lefebvre, Victor Hugo, and the like. Then, again, such pinks as Mrs. John Laing, Mrs. R. G. Sharman-Crawford, and Madame Gabriel Luizet are still unsurpassed in their different shades.

Turning now to the table of Teas and Noisettes, it may be mentioned in passing that the hot and dry weather of the past summer, which proved so trying to many of the H.P.'s and H.T.'s, appeared to be rather welcomed than otherwise by the Teas. At all events, the quality of the latter at the Temple Rose Show was much in advance of that shown in the classes devoted more particularly to Hybrid Perpetuals and Hybrid Teas. In glancing at the table it will be noticed that Catherine Mermet and its white sport, The Bride, no longer head the list, and that the places they have occupied for so many years past have been taken by Maman Cochet and its white sport, White Maman Cochet. At the last exhibition The Bride was staged an average number of times, but not so Catherine Mermet, which only once before in the last fifteen years has been as poorly represented. Among other sorts which were to be found in an exceptionally small number of stands this year were Souvenir de S. A. Prince, Souvenir d'un Ami, Marie Van Houtte, Hon. Edith Gifford, and Anna Olivier, which have never before been as seldom staged, while Madame Hoste and Niphetos have only once before appeared in as few boxes. On the other hand, Comtesse de Nadaillac and Innocente Pirola have seldom before in the same fifteen years been as numerous represented.

The present year has been described as a "Maman Cochet year." Be that as it may, the record of that splendid variety at the last metropolitan exhibition of the N.R.S. has never before been even approached by any other Rose whatever. That any variety should appear in more than sixty different stands is a feat I should have regarded only last year as almost an impossibility. Considering the ages of the two varieties, Maman Cochet and White Maman Cochet—the one eight and the other four years old—the performance of the latter is equally, if not still more, surprising. That any new Tea should four years after its introduction succeed in rising to the second place on the list, as White Maman Cochet has done this year, appears almost incredible. With these two varieties we enter upon a new type of Tea Rose, the want of which has evidently been long felt—a type in which, not only is the plant more vigorous, but the flowers larger than in the ordinary run of exhibition Roses in this section.

The newer Teas—those which are six or less years old—next demand our attention. In the present analysis, although only three in number, they are all of exceptional merit. Muriel Grahame, a pale cream member of the Catherine Mermet family, was sent out in 1896, and since last year has risen from No. 17 to No. 11. White Maman Cochet is a superb white version of Maman Cochet, and was first distributed in 1897. Last year it stood at No. 23, and now occupies the second place in the table, and it requires no great foresight to predict that it will shortly be at the top of the list. The other new variety is Mrs. Edward Mawley, which both in form and tint is quite distinct from all the other pink Tea Roses. Since last year it has risen from No. 23 to No. 15, and when more generally grown is certain shortly to occupy a still higher position.

I now for the first time introduce into this analysis a table of garden Roses, by which term is meant those varieties the individual flowers of which are not sufficiently large and perfect in form to be set up separately in boxes like the Roses mentioned in the foregoing tables of exhibition Hybrid Perpetuals and Hybrid Teas, and of exhibition Teas and Noisettes. This type of Rose has in recent years become very popular in gardens on account of the freedom with which many sorts included in it flower, and also because of the great variety of tint that is to be found in them. Unlike the so-called "exhibition" Roses, this class of Rose is staged at the shows in bunches, and a very charming appearance do the stands of these garden Roses present. In the following table the varieties are arranged according to the total number of times they were staged in prizewinning stands at the last two metropolitan exhibitions

of the National Rose Society, and no Rose has been included which was not exhibited at one or other of those shows three or more times.

Garden and Decorative Roses.

Position in Analysis.	Name.	Total No. of Times Staged in the Two Years.	No. of Times Staged in 1900.	No. of Times Staged in 1901.
1	Gustave Regis (H.T.)	22	11	11
2	Marquise de Salisbury (H.T.)	18	9	9
3	William Allen Richardson (N)	17	7	10
4	Madame Pernet Ducher (H.T.)	16	8	8
4	Rosa macrantha (S.)	16	8	8
6	Turner's Crimson Rambler (Cl. Poly.)	14	4	10
7	Camœus (H.T.)	13	6	7
7	Madame Chédane Guinoisseau (T.) ..	13	7	6
9	Bardou Job (H.T.)	12	6	6
10	Alistair Stella Gray (N.) ..	11	4	7
11	L'Idéal (T.)	10	4	6
11	Madame Falcot (T.)	10	5	5
11	Reine Olga de Wurtemberg (H.T.) ..	10	6	4
11	Souvenir de Catherine Guillot (T.) ..	10	3	7
15	Paul's Carmine Pillar (S.)	9	4	5
15	The Garland (H.C.)	9	3	6
17	Claire Jacquier (Cl. Poly.)	8	4	4
18	Anne of Geierstein (Sweet Brier) ..	7	4	3
18	Laurette Messimy (C.)	7	5	2
18	Ma Capucine (T.)	7	5	2
18	Mignonette (Poly.)	7	4	3
18	Papillon (T.)	7	2	5
18	Paul's Single White (S.)	7	3	4
24	Crested Moss (Moss)	6	3	3
24	Hebe's Lip (Sweet Brier)	6	3	3
24	Homère (T.)	6	1	5
24	Perle d'Or (Poly.)	6	4	2
24	Rosa moschata alba (S.)	6	3	3
24	Rosa Mundi (Damask)	6	4	2
30	Brenda (Sweet Brier)	5	5	—
30	Madame Pierre Cochet (T.)	5	1	4
30	Meg Merrilies (Sweet Brier)	5	4	1
30	Red Damask (Damask)	5	3	2
30	Rosa himalayica (S.)	5	2	3
30	Rosa lucida plena (Hybrid of species)	5	2	3
36	Dr. Grill (T.)	4	1	3
36	Gloire Lyonnaise (H.T.)	4	1	3
36	Grüss an Teplitz (H.T.)	4	1	3
36	Hélène (Cl. Poly.)	4	1	3
36	Pink Roamer (Wich.)	4	1	3
36	Rosa Andersoni (S.)	4	3	1
36	Rosa Brunonis (S.)	4	1	3
36	Rosa multiflora grandiflora (S.)	4	3	1
44	Bennett's Seedling (Ayr.)	3	3	—
44	Killarney (H.T.)	3	—	3
44	Madame Jules Grolez (H.T.)	3	—	3
44	Rosa Moschata (S.)	3	3	—

In the above list will be found ten Hybrid Teas, nine Teas, nine Single-flowered Roses, three Climbing Polyantha, four Hybrid Sweet Briers, two Noisettes, two Polyantha, two Damasks, one Hybrid China, one China, one Moss, one Ayrshire, one Hybrid of species, and one Wichuriana.

The most noteworthy features are—(1) The great preponderance of Hybrid Teas, Teas, and Singles; (2) the number of climbing varieties; (3) the very small number of old-fashioned Roses—in fact, only Crested Moss, Rosa Mundi, The Garland, Bennett's Seedling, and Rosa lucida plena find places in the list. And yet one of the principal objects in starting classes for "garden" Roses years ago was to revive the cultivation of these old favourites, which it is still desirable should in some measure be retained. This object might even now be effected if special classes were set apart at our principal Rose exhibitions for either Roses sent out before a certain date or for summer-flowering Roses only.

In bringing this analysis to a conclusion, I wish to thank those kind friends who again assisted me this year in taking down the names of the Roses in the numerous prize stands at the Temple Rose Show.

Roses for General Cultivation.

The following lists have been drawn up with a view to assist those who have but little knowledge of the different kinds of Roses in making a selection for their own garden. All the established varieties are arranged under the various headings, according to their order of merit, so that however small the number of Roses required may be, a satisfactory choice can readily be made. The varieties marked with an asterisk are either quite new or of recent introduction.

Exhibition Roses.

HYBRID PERPETUALS.—*Pink*: Mrs. John Laing, Mrs. R. G. Sharman-Crawford, Killarney,* Mrs. Cocker.* *Crimson*: Ulrich Brunner, Dupuy Jamain, Fisher Holmes, Général Jacqueminot, Alfred Colomb, Captain Hayward. *Rose*: Suzanne M. Rodocanachi. *Dark Crimson*: Prince Arthur, Prince C. de Rohan, Charles Lefebvre. **HYBRID TEAS.**—*White*: Viscountess Folkestone, Kaiserin Augusta Victoria, Bessie Brown.* *Pink*: La France, Caroline Testout, Mrs. W. J. Grant. *Rose*: Marquise Litta. **TEAS AND NOISETTES.**—*White*: Souvenir de S. A. Prince, Innocente Pirola, White Maman Cochet.* *Pink*: Maman Cochet, Souvenir d'un Ami, Mrs. E. Mawley.* *Yellow*: Marie Van Houtte, Madame Hoste, Caroline Kuster.

Garden or Decorative Roses.

SUMMER-FLOWERING.—*Provence*: Common or Cabbage (pink). *Moss*: Common or Old (pink), Blanche Moreau (white). *Damask*: Rosa Muudi (striped). *Austrian Briar*: Austrian Copper (coppery red), Austrian Yellow (yellow), Harrisoni (yellow), Soleil d'Or* (yellow). *Hybrid Sweet Briars*: Janet's Pride (white, tipped crimson), Lady Penzance (coppery yellow), Jeannie Deans (crimson). *Climbing Roses*: Crimson Rambler (crimson), Bennett's Seedling (white), Claire Jacquier (yellow), Carmine Pillar (carmine, single), The Garland (blush), Rosa himalayica* (white).

AUTUMN-FLOWERING.—*Hybrid Teas*: Gustave Regis (yellow), Grüss an Teplitz* (crimson), Madame Jules Grolez* (rose), Souvenir du Président Carnot (white), Madame Abel Chatenay (pink), Grand Duc A. de Luxembourg* (pink), Augustine Guinoisseau (white), Bardou Job (crimson, single). *Bourbon*: Souvenir de la Malmaison (white). *China*: Old Blush or Common Monthly (pink), Laurette Messimy (rose), Madame Eugène Resal (rose), Mrs. Bosanquet (white). *Teas and Noisettes*: L'Idéal (metallic red), Madame Lambard (rose), G. Nabonnand (flesh), Beauté Inconstante (metallic red), Souvenir de Catherine Guillot* (coppery carmine), Mrs. B. R. Cant* (rose), Corallina* (crimson). *Perpetual Scotch*: Stanwell Perpetual (blush). *Polyantha*: Madame Anna Maria de Montravel (white), Perle d'Or (yellow), Cécile Brunner (pink), Leonie Lamesch* (copper and yellow), Eugénie Lamesch* (yellow). *Japanese*: Blanc Double de Coubert (white), Alba (white, single), Madame G. Bruant (white). *Climbing*: Gloire de Dijon (yellow), Longworth Rambler (crimson), Madame Alfred Carrière (white), W. A. Richardson (yellow), Reine Olga de Wurtemberg (crimson), Rêve d'Or (yellow), Aimée Vibert (white), Wichuriana* (trailing).—E. M., *Berkhamsted*.

Renovating Vine Borders.

In soils of a suitable nature and the cultural treatment proper, Vines flourish for an indefinite period. Artificial borders, however, are mostly provided for Vines under glass and the roots confined to limited areas. In not a few cases the soil becomes defective, an unfavourable rooting medium implying unsuitable nutrition, and the results in crops are unsatisfactory. Where such is the case thorough renovation of the border is desirable. In many instances, however, a partial renewal of the soil, or such portion of it as will secure active feeders, is generally attended with favourable results.

Where Vines, therefore, are not in a satisfactory condition, no time should be lost in removing the soil down to the roots and picking it from amongst them, so as to displace as much of the old stuff as possible with fresh compost, and it is best effected whilst the leaves are upon the stems, but not before they have performed their functions to the extent of perfecting the buds and wood. In case the border is found very unsatisfactory, and the roots few and deep, it will be necessary to remove all the soil and renew the whole

border, commencing with the drainage, which should be clear and 9in to 12in deep, with a 3-in layer of fine material on the top, old mortar rubbish freed from pieces of wood answering perfectly. There must be a 3in or 4in drain under the drainage, with the proper fall and outlet to carry off superfluous water.

The soil should consist of the top 2in or 3in of a pasture, where the staple is a good yellow or hazel loam, with one-sixth of old mortar rubbish, one-twelfth of charred refuse or wood ashes, and one hundredth of crushed bones, all well incorporated. Two depths of compost is ample, allowing about 6in more for settling, and the roots should be laid on the top foot in layers according to their inclination, encouraging those from near the collar or at it by laying them just beneath the surface, making the whole compact, and leaving the soil moderately dry.

If the roots are inside and outside one part may be done one year and the other the next without any danger of loss of crop. Take care to preserve all the roots possible, but cutting off broken and paring bruised ends smooth, and keep them as much as practicable from the drying influences of the atmosphere whilst the operation is in progress. If the roots are long and bare of fibres notch them at about every foot or 18in on the under side from a quarter to half through with the transverse cut next the stem, and this will induce fibres to form at the notches. Afford a good watering to settle the soil about the roots, then sprinkle on each square yard and point or scratch in 4oz of some approved fertiliser, mulch with about an inch of short manure, and cover outside borders with a few inches thickness of leaves with a little litter over them.—G. A.

Retarded Lily of the Valley Crowns.

At the present season of the year, how greatly gardeners and florists appreciate the fine spikes of Lily of the Valley which may be obtained from retarded crowns, for choice flowers are usually scarce during October and November. At the time of writing King Frost has spared the outdoor flowers, and the borders are yet gay with Chrysanthemums, Dahlias, Michaelmas Daisies, and Helianthemums. Under glass, many varieties of Chrysanthemums are already in full beauty, and onward till Christmas the popular "Autumn Queen" will supply hosts of flowers for decorative purposes. The Lily of the Valley and the Roman Hyacinth will, however, during that period be principally relied upon to supply sweet choice white flowers. Although retarded crowns of the former may be brought into flower quite easily, the amount of success achieved under different systems varies considerably. Sometimes, during October, when the weather has been bright and clear, I have found them come on satisfactorily if placed under a hand-light, and kept close and dark for a time, in a comparatively cool house which is heated slightly at night.

When, however, November comes round, and the days are damp and the nights cold, I find by far the better results are obtained by giving the crowns bottom heat. If kept too cool, the flower-stalks fail to lengthen well, and as progress is slow, the bottom bells lose their freshness before the terminal ones begin to open. I have at various times attempted to grow these in a variety of ways, and the result of my experiments is that under the following conditions they succeed splendidly:—Place the crowns in pots or boxes as soon as they arrive, employ an open compost in filling them in, so that the heat will pass freely between the roots. After this operation is performed, place them in a frame, in a propagating or forcing house, where there is a brisk bottom heat. Water thoroughly, and darken the frame until the spikes of flowers begin to develop. Then admit light and air by degrees, but shade from sunshine. Always maintain a moist atmosphere, and allow the soil to get slightly dry, then water copiously with warm water.

If too much water is given, or rather I should write if the soil is kept too wet and sticky, some of the flowers, especially the weaker ones, will turn yellow. If, on the other hand, it is allowed to get too dry, the lower bells will quickly lose their freshness. When the treatment is suitable, and the crowns good, the flower stems will be long, and the bells large and fresh looking. Florists, as a rule, prefer pale yellow to deep green leaves, and the tint can easily be regulated by a greater or lesser amount of shading. I trust this note may be helpful to some who are not altogether successful in their treatment of retarded crowns. If such watch closely, they will generally be able to discover the exact treatment in regard to heat and moisture, which answers the best, but it has to be found out by actual experience, as the dividing line between successful and unsuccessful practice is a fine one indeed.—H. D.



Young Gardeners' Testimonials.

How often we see in the advertisement columns of our gardening papers that applicants for a vacant situation must enclose copies of testimonials; yet we find some head gardeners who decline to give their young men written character testimonials when they are leaving, saying when asked for one, "Apply to me any time you want help and I will help you." This is all very well, but does a young man always know the whereabouts of his would-be benefactor? I have known several instances of young men having been employed as journeymen in gardens for two years, and who conducted themselves well, having been refused a written testimonial by their garden chief on leaving. When it is an understood thing in a gardening establishment that a man who conducts himself in a satisfactory manner, shall, upon leaving, receive a testimonial, he is all the more earnest that it shall be a good one.—TOOT.

The Turnip Flea Beetle.

I do not ever remember seeing so many of these insects before. They are doing, and have already done, great damage to several Turnip crops that have come under my notice. In one instance the leaves were literally black with the horrid little pest, and even after a very heavy rain they were as much in evidence as ever. Besides the Turnips, the Cabbage section is troubled quite as much. Many bad cases I have heard of. Many really old hands say, "That never before have they seen such devastation among plants from the 'flea,' as it is affectionately called."

I cite one very bad case I heard of. Several thousands of plants, i.e., Broccoli, Kale, and Autumn Cauliflower, were put out after a nice shower of rain, and everything looked promising for their well-being. But no; it was not to be, for the next morning after planting showed the terrible ravages of the Turnip flea. The amount of damage in a very short time proved to be so great, that the whole plot required replanting. Thousands of fleas made their appearance in the short space of twenty-four hours.

Another plant I notice is much relished by the Turnip flea, viz., the garden Nasturtium (*Tropæolum majus*). Hundreds of the little insects may be seen even on very small plants; they seem to attack the edges of the leaves more than any other part. I don't think the insect in question is the *Phytophaga nemorum* of entomologists; it is of a metallic black colour. The small white butterfly (*Pieris rapæ*) is more numerous than ever, and plants are beginning to feel their presence. The large *Pieris* (Cabbage butterfly) is not a quarter so numerous.—W. H. R., Kent.

Chrysanthemums in the Garden.

We are on the eve of the war. Champions of the Autumn Queen have girded up their loins ready for battle, and show blooms and new varieties will claim a monopoly of attention till the season is over. It is all very interesting and fascinating, but I question whether the possibilities of the popular flower have not led to the ignoring of its usefulness and simple beauty in too many cases. Fortunately the Chrysanthemum is a cosmopolitan flower, which accounts largely for its immense popularity, and just now there is many a little show in places where competition is never thought of. The great Japanese flower, or the faultless incurved, have charms all their own far removed from those of the bunch of blossoms that come as they please on the semi-neglected clump in the garden.

But this is one great charm of the Chrysanthemum. It will not be denied, and in spite of inattention it comes up every year, and with its showy colours brightens the dull days of autumn, if only Jack Frost is merciful. As I write our village is far from being a cheerless place. It is true that gardens look ragged and untidy, and falling leaves hide the walks and cover the grass plots. But there is brightness in the dying leaves of the Virginian Creeper on the walls, and little front gardens by the wayside are resplendent under the influence of the Autumn Queen. The cottagers do not bestow much trouble on the Chrysanthemums. They were planted in the first place in the form of old stools obtained from friendly gardeners, and by means of bits cut from the clumps and cuttings handed round they have multiplied in numbers till the same varieties are represented in the fronts of numerous cottages. And these are not of an up-to-date character altogether, for in the cottage

garden there flourish varieties that once figured in the cream of collections, but have had to give way to modern introductions. There is the bright pink of Margot, the rich bronze of Source d'Or, the feathery white petals of Elaine, and many another sort, the names of which are almost forgotten by Chrysanthemum specialists.

But what's in a name? The cottagers think nothing of the titles, but they like the flowers, which do so much to brighten the days when autumn is quickly passing into winter. A few flowers adorn the side-board, there is a bunch for the visitor who chances to call, and perhaps a box is despatched to a relative who lives in town. And the others remain as long as they will linger to cheer the gloom of the season and brighten the somewhat dull aspect of the garden. While gloating over victories at the show, then, and enlarging on the merits of the chaste blooms in the conservatory, let us not forget that the Chrysanthemum presents one of its greatest charms when growing semi-wild and blooming naturally and profusely in the flower garden.—G. H. H.

A Kindly Tribute.

I write to express the pleasure I experienced in reading the Journal. It is a paper for gardeners, farmers, landowners, and all others interested in gardening or farming, as it deals with subjects in which such classes are interested in a more comprehensive way—on a broader basis than horticultural publications which cater principally, or only, for the amateur. The spirit of "fraternity" which pervades its pages inspires gardeners to regard it as "their journal," to which they may look with confidence for sound information, sympathy, and at times a true touch of humour. Most readers and writers throughout Britain—and indeed Greater Britain across the seas—are drawn together by a bond of common interest, from which, as the years roll on, hosts of enduring friendships are formed, and the influence of gardening is vastly extended. A journal which continues to do such splendid work must ever occupy a high position in the horticultural world. Go forward with your work and prosper, dear old paper, which first aroused in me a deep interest in Adam's art. Such is the wish of an—OLD READER.

Natural Curiosities.

Mr. Albert Brown writes from The Bank, Barking, Essex, to say that he has an Apple tree in his garden which is in flower for the second time this year. Mr. F. Fletcher, of Fair View Terrace, Matlock Bath, sends a Primrose which he has picked in his garden. Mr. F. Bridger, gardener to Lord de L'Isle and Dudley, Penshurst Castle, exhibited at the Penshurst Flower Show forty Potatoes weighing over 1lb each. Mr. W. Bright, of Terling, Witham, Essex, has grown 126lb. of Royal Sovereign Potatoes from 7lb of seed. Mr. C. H. Wood, jun., of The Warren, Theydon Bois, Epping, has had 13½lb. of Potatoes from one root. Mr. J. W. Cooper, Nutbourne, Pulborough, Sussex, has a single Tomato plant bearing seventy-eight Tomatoes ranging in size from 6 to 10 inches in circumference. Mr. J. W. Titley, of Ascot House, Upper Tichborne Street, Leicester, has cut a yellow Pumpkin weighing 87½lb., the girth being 5ft 6in; and Messrs. Cannell and Sons staged one at the Drill Hall weighing 106lb. Many readers report the capture of specimens of the convolvulus hawk moth, which appears to be unusually plentiful this year, particularly in and around London.

The Amaranthus.

No herbaceous border should, in my estimation, be without a few plants of this genus; in fact the border without them is robbed of one of the most graceful and charming subjects it is possible to obtain. Two species of genus I would most emphatically bring into notice; they are old "stagers" I know, but in these days the old garden plants our forefathers delighted in are often forgotten, and are only seen in places where the management is still under one of those genial members of the old school.

The Love-lies-Bleeding (*Amaranthus caudatus*) is one of those plants better known a few decades ago to the gardener than now, but what can be more charming in a mixed border than this plant with its pendulous spikes of blood red flowers?

It is very often because these many charming old-fashioned plants are so easily grown that they fail to obtain the appreciation due to them. The Prince's Feather (*A. hypochondriacus*) with its purple coloured foliage, and strikingly upright spikes of red flowers, makes a very fine contrast, growing in close proximity with its near relative the forementioned. Sown under glass in March and planted out, their requirements are few. But if the protection of houses is not to be had, sow the seeds a few in a clump and thin out, in the open border in April or early May; they come into flower a little later, but their charms are in nowise lost for that reason.—H.



Cattleya × Iris var. aureo-marginata.

This variety was shown before the Orchid Committee of the Royal Horticultural Society at the Drill Hall meeting, held on October 15th. Messrs. Charlesworth & Co., Heaton, Bradford, are the possessors, this being an improvement on the variety for which they received an Award of Merit on September 24th. The sepals and petals are bronzy yellow in tint, with clear yellow margin; very attractive indeed they are. The lip, as seen in Mr. Shayler's drawing, is deeply coloured, being rich crimson, and intensifies to a deep claret crimson towards the centre. The owners were awarded a First Class Certificate.

The Week's Cultural Notes.

During the summer months the sphagnum moss upon many of the block plants, such as *Oncidiums* of the *teretifolia* section, *Ionopsis*, *Sophranitis cernua*, and similar weakly growing subjects is apt to grow very long, and hold a good deal of water in suspension. As the winter comes on the retention of so much moisture about the roots and base of the bulbs is fraught with danger, and it will be well to remove a little of it. After removing it rather more watchfulness is needed for a time, as the plants dry up much more rapidly.

The foliage has now fallen from the earliest plants of *Dendrobium aureum*, and the roots may now be kept almost perfectly dry, only moistening them a little should the pseudo-bulbs show any sign of shrivelling. This and *D. nobile*, or any of the hybrids raised by crossing them, are the best for forcing into flower early. The old plan of turning the plants upside down when they are placed in heat is not a bad one, but they must be reversed when the flower buds show, or the natural pose of the blossoms will be spoilt. In any case it is necessary to keep the roots absolutely dry for a time, else more growth than flowers will result.

That fine winter-flowering Orchid *Zygopetalum Mackayi* requires very liberal supplies of moisture now. The young roots are busy in the new compost, and the plant has the double strain of forming both flower spikes and new pseudo-bulbs. It is now, if ever, that a little stimulant in the way of liquid manure is helpful, that from well clarified soot water being as good as any. Avoid getting this into the cup formed by the growing pseudo-bulbs, as it causes them to decay, even clear water being detrimental, in damp weather especially; and see too that the roots are moist before giving liquid manure.

The night temperature now must be judiciously managed, anything like a dry hot atmosphere being avoided. Too much heat will excite the plants unduly, while a cold night means a check, from which they do not readily recover. Without sticking too closely to stated figures, the minimum reading now may be 65 degrees for the East Indian house, 60 degrees for the *Cattleya* house, 55 degrees for the cooler section. As the winter advances and cold nights occur it will be found safer to drop a little below this than to press the fire heat unduly, and whenever the pipes are made hot there must be plenty of water to soften the atmosphere.—H. R. R.

Kew Orchids.

Besides some very fine *Cattleyas*, *Oncidiums*, and a grand specimen of *Vanda cœrulea* now in flower in the houses at Kew, the visitor will also find quite a number of beautiful and interesting species of lesser known genera.

Pergolas.

Adaptations of the pergola appear to have come very much to the fore during the last year or so in many of our English gardens, and taking into consideration the enjoyment to be obtained for quite four months of the year from a shady bowery walk, with rustic seats built at intervals, also the numerous free-growing hardy climbing plants at our disposal for rapidly covering this form of structure, it is not surprising at the revival of a somewhat ancient style of gardening. There are various ways in which the pergola may be adapted to the beautifying of our gardens, though it must be borne in mind that the most ornamental style of building them is not always the most beautiful in the end, for given liberal treatment the creepers will rapidly grow, thereby hiding any defects in the framework of the structure. I have in my mind's eye one built at considerable expense by an ornamental carpenter, all Oak, with the bark stripped off, and finished with a coat of varnish. Certainly if it were the beauty of the woodwork that was to be admired, all would be well and good; but it presented an artificial appearance from end to end. This should not be so. The aim should be in this, as in most other features of a garden, to imitate Nature as much as possible, due consideration being given to the features of the grounds which it is to adorn, and if possible it should span a frequented walk; if an open one so much the better, leading to other charming features.

The form of the structure should be as simple as possible, and be governed by circumstances and individual taste. I have seen brick, and also stone pillars used to support the timbers. These, of course, will stand the test of time, but masonry requires a considerable amount of judgment ere it can be introduced. I am more in favour of stout Oak posts, 9 inches in diameter, with the bark left on. These should be let into the ground about 2 or 3 feet, and if dressed with tar that length it will conduce to their lasting properties, the base of each post being let into a small bed of concrete to ensure a firm hold. Each must be connected and firmly secured by long pieces of similar dimensions running along the sides, while the top may be formed of lighter pieces, laid across, at a distance of 2 feet apart. The sides may be either left entirely open, or a few pieces may be nailed across a short distance down from the top, but the more simply built the better. As regards the height, it should not be less than 10 feet, for the effect of creepers entwining and rambling down through the top and over the sides will greatly enhance the whole

appearance in time to come; therefore sufficient head room must be allowed to allow of walking underneath without discomfort.

Fruit pergolas formed of iron entirely are an interesting adjunct to a kitchen or fruit garden, especially if a wide walk is at disposal. If these are planted with suitable varieties of Apples and Pears on the dwarfing stocks, a pleasing feature is secured in the spring, when the blossom are open, while in the autumn and winter months the produce from the trees helps to keep the shelves in the fruit room occupied. The thought has sometimes struck me that where a suitable wall is not at disposal, yet where there is a warm sheltered position, why such a pergola built a few feet from the ground should not be planted with Peaches and Nectarines, choosing suitable varieties for the purpose. Protection from spring frosts, and also cold winds, could easily be afforded by some light material, such as "frigi domo" canvas.

Of the numerous hardy climbers suitable for rapidly covering a pergola, I may mention the many varieties of the *Clematis*, *C. Jackmanni* and *C. J. alba* being very free. Then we have *Roses* in variety too numerous to detail, though among the climbing kinds I must mention *Crimson Rambler*. Vines, the *Claret Vine* especially, afford a beautiful effect when trained upon the upright supports, and laden with its clusters of fruit, and others will be named in a succeeding note.—GEO. HAGON.



CATTELEYA × IRIS VAR. AUREO-MARGINATA (Natural Size).

NOTES & NOTICES

Royal Warrant.

The Royal Warrant of seedsman to His Majesty the King has been conferred on Mr. John K. King, seed grower, Coggeshall, Essex, and Reading, Berks. Mr. King's business was founded in 1793.

Mangoes

A good steady increase was shown in Queensland in the area under this delicious fruit for the past as compared with the previous year, the area for 1899 being 245 acres, returning 191,074 dozen, which increased in 1900 to 411 acres, yielding 277,444 dozen. Of this area 349 acres were productive, whilst 62 acres were non-productive, not having yet come into bearing. All the northern portion of the State on the seaboard seems to be well adapted to the growth of this fruit, which can be produced there in any required quantity, but the drawback seems to be the difficulty of finding a suitable market. It is quite true that much of the fruit grown and sent to market is from trees bearing inferior Mangoes, and no one would readily acquire a taste for this fruit if only the fibrous varieties, with strong, unpleasant flavour, were presented for their use. But there are Mangoes of most delicious flavour, and free from fibre, which can be grown as easily as the worthless kinds; and if these are properly gathered and packed they should be saleable in any market. The total production in 1900 was 277,444 dozen.

Pavings for Streets.

To our gardener friends and others with country leisure might we be permitted to bring to notice a subject which is of great importance, and which seems to be occupying considerable consideration from Westminster citizens? The question is that of paving for streets, and as our readers have much to do with pavings, or road-making at least, the subject may raise suggestions. A writer to a daily paper wishes asphalt in place of wood paving. He says: "It is smoother, more durable, and much less dirty and dusty. Perhaps it may be more slippery, but there cannot be much to choose between them on this score. If you look along any of our great wood-paved thoroughfares on a dry sunny day, you see what looks like a mist stretching from end to end, but a mist composed of the filthiest and most irritating dust imaginable, injurious to eyes, lungs, and clothes, and damaging to many kinds of goods exposed in shops. With asphalt, on the other hand, there is little or none of this, but I do not mean to contend that it is perfect. The truth is, we want a new pavement, free from the defects of asphalt and wood, and whoever can invent one will confer an inestimable benefit on the public." Asphalt would be useless in warm weather.

Field v. Indoor Mushrooms.

Mushrooms, i.e., field Mushrooms, are plentiful in the country, and to some extent they are a drug on Covent Garden Market. They can be bought wholesale at a sum which approximately figures out at 1½d. to 2d. per pound to buyers of such a mass of Mushrooms as constitutes a ton. Retail, they can be sold at a profit from 3d. to 4d. But they are short-lived, inferior fungi, and the Bond Street fruiterer will have none of them "It is not too much to say," Mr. Edward Monro, of Geo. Monro and Co., who are large dealers in Mushrooms, said to a daily paper's representative, "that Mushrooms are an absolute curse to Covent Garden. How is that? Well, Mushrooms come to us from all over the country. From Wales, Cornwall, Berkshire—anywhere. The life of the field Mushroom, after it is picked, is about twenty-four hours. After that it has to be consigned to the Strand Board of Works cart. The consequence is that the fungus has to be sold very cheap. A high-class fruiterer will not touch the field Mushroom. He buys Mushrooms grown in Mushroom beds, indoors—Mushrooms which last two or three days, and which retail at 6d. or 9d. a pound. Not one in a hundred of the field Mushrooms goes to the ordinary consumer. The large proportion of the Mushrooms fit for consumption upon reaching the Metropolis go to the 'smasher'—the man who makes ketchup."

Cassell's Dictionary of Gardening.

Part 6 (price 7d. net) of this new publication is issued. A coloured illustration of "Some High-class Cannas" adorns the front portion. The "part" embraces from Cortaderia to Deppca.

Variorum.

In "Chambers's Journal" for September 28, Mary Georges contributes an appreciative article on the bulb farm of Messrs. Hogg and Robertson. * * A Pumpkin used in the decoration of Appledore Wesleyan Chapel at the harvest thanksgiving services on Sunday measured 18in in diameter, and was estimated to weigh at least 56lb. * * The Metropolitan Public Gardens Association (London) have decided to offer to plant trees on Brixton Parade, in the Dulwich Road, in the Highgate Road, and in the Norfolk Square churchyard.

Pine Apples from Australia.

The area of ground under Pine Apples in Queensland was less for 1900 than for 1899, the areas being 939 acres, yielding 424,835 dozen in 1900 against 994 acres, yielding 401,692 dozen in 1899, so that whilst there was a reduction of 35 acres there was an increase in the yield of 23,143 dozen. The total production in 1900 was 403,710 dozen. In addition to yielding in large quantities a product that under careful cultivation is one of the most delicious of all fruits, from the leaf of this plant, either in its wild or its cultivated state, a fibre may be obtained surpassing flax for strength, fineness, and glossy appearance. Their relative strengths were found to be as 26 is to 35; it is also found to possess special qualities for rope-making, it being a good damp resistant, and from the fineness of its fibre it is considered by some experts that it would offer special advantages for mixing with cotton or wool. As the plant grows so freely in Southern Queensland it is possible that a little investigation might lead to its further utilisation in this direction.

Shirley (Southampton) Gardeners' Improvement Association

The monthly meeting of the above society was held at the Pound Street Mission Room, Shirley, on Monday, October 21, when Mr. F. W. E. Shrivell, F.L.S., F.R.H.S., gave a most interesting lecture on "Chemical Manures for Kitchen Gardens," in the course of which he said it was a wonder to him that gardeners, who were so smart in most things that concerned their profession, should not master the elementary knowledge of manures, which would be so useful to them, and could be learnt in a very short time. Though called artificial, the chief manures, nitrate of soda, superphosphate of lime, and kainit, were all natural productions. Natural nitrates, for example, were formed in this country. If it was a hot summer, and a dry winter, they kept in the soil till the spring came, and as a consequence everything in the ensuing season seemed to do well; but if we had a wet winter, these valuable nitrates were washed away into the subsoil, and they had a season that they called unkindly, for nothing did well. Nitrates are plentiful in Chili; superphosphate of lime used to be found in Cambridgeshire, where they were supposed to arise from the bones or excreta of animal life. Kainit, or potash, was dug out at a depth of 10ft in a part of Prussia which was supposed at one time to have been covered with water, which had evaporated, and these salts left behind. Nitrogen was a tissue builder, also phosphoric acid, and kainit was used to balance the two. A good dressing for bush fruits is 10lb superphosphate and 10lb kainit, sown broadcast in the autumn, and from 7lb to 10lb nitrate of soda in the spring, to 100 square yards. For the kitchen garden, superphosphate, 14lb, kainit, 10lb, with half-load farmyard manure dug in, in the autumn, and 10lb of nitrate of soda in two dressings in the spring. For a lawn manure, "basic slag" 14lb, kainit 9lb, to 100 square yards put on in the autumn, and 2½lb nitrate of soda in the first week in March. The members made a very fine exhibition at this meeting with fruit and flowers. First prize for dessert and kitchen Apples, Mr. J. Hallett; second, Mr. J. Biggs. First dessert and stewing Pears, Mr. J. Biggs; second, J. Hallett. Mr. F. Snellgrove, first-class certificate collection of fruit and flowers; ditto, Mr. Thomsett. Mr. Wilcox, certificate for Michaelmas Daisies. Mr. B. Ladhams, F.R.H.S. (chairman), had a grand display of cut blooms, which were vhc. One new member was made. A vote of thanks to the lecturer, chairman, and exhibitors closed a very interesting evening.—J. M.

Gardening Changes in Perth District.

Mr. T. Dobbin from Balhousie Castle, Perth, to Balthayock House, Kinfauns. Mr. J. Low from Glencarse House, Glencarse, to Balhousie Castle. Mr. James Lindsay from Baleraig, New Scone, to Glendoick, Kinfauns. Mr. William Wilkie from Lignwood, New Scone, to Baleraig. Mr. Mathewson from Inchyra House, Glencarse, to Lignwood. Mr. T. Peggie to Cleeve, Cherry Bank, Perth.—ALBYN.

A Sundriesman's Catalogue.

It is that of Mr. C. E. West, of Roundhay. There is a somewhat humorous explanative within brackets after the name "Roundhay" on the front page of this catalogue, and consists of the words "*sufficient address*," in italics. The humour, or felicity, that it calls up, lies in the fact of the business eagerness of Mr. West to save his customers every possible item of trouble. How simple! C. E. WEST, ROUNDHAY. And with interest to entertain us outside the covers, what is there within? Everything of a mechanical nature that is necessary to be got for the garden is listed, and a long rigmarole is printed, but which, at the same time, we seriously recommend to gardeners and others, in which the compiler of the catalogue asks why labour facilitating inventions and artificial aids to plant culture are not known and adopted by those whose business or pleasure it is to grow plants and attend to gardens. Amongst some of the appliances offered we may mention plant and flower stands, exhibition boards, flower holders, syringes of all sorts and watering cans, baskets, shears, knives, fumigators, and quite an array of things that are of great usefulness and necessity. But the best thing to do is to write for the catalogue to the maker himself, at Roundhay.

Devonshire Gardeners

The annual meeting of the Devon and Exeter Gardeners' Association was held on Thursday evening, October 24, in the Guildhall, Exeter. Mr. Chas. Berry (horticultural instructor under the Devon County Council) occupying the chair. Among others present were Messrs. Andrew Hope (hon. secretary), W. Mackay (hon. treasurer), W. Andrews, J. Baker, W. R. Baker, W. Charley, G. C. Crabbe, S. Radley, G. Rogers, and J. Weeks. The Committee, in presenting their annual report, reminded the members that the association had completed ten years of steady progress and useful work, in which a great variety of subjects had been handled. It was a fair assumption that some permanent good had been done to gardening as a profession, and to the followers of it in the neighbourhood. In July an enjoyable and profitable excursion was undertaken by the members to Cardiff, the members attending the extensive flower show there at the invitation of their Welsh sister association. The trip was undertaken without cost to the association. Last spring a new feature was introduced at the fortnightly meetings by a friendly competition among the members of single dishes of vegetables or specimens of any flowering plant. These competitions were found to give an interest to the meetings, and the committee unanimously recommended them to be continued. The Association was still in a financially prosperous condition. The committee thanked the president (Mr. E. A. Sanders) for his continued interest and generous help, and recorded their appreciation of the assistance given by the Mayor in continuing to allow the use of the committee room of the Guildhall for the fortnightly meetings. The help rendered by the Press was also acknowledged, and the report concluded by stating that an excellent series of papers had been arranged for the present session, and that the prospects of the association appeared to be as bright as at any period of its history. The financial statement showed a balance in hand of £15 4s. 4d., exclusive of one or two outstanding accounts. On the motion of the chairman, seconded by Mr. Crabbe, the report and accounts were adopted. Mr. E. A. Sanders was unanimously re-elected president, on the motion of Mr. Mackay, seconded by Mr. Andrews, and the following vice-presidents were re-elected:—The Mayor and Sheriff, Major Tracey, Messrs. Imbert-Terry, P. C. M. Veitch, G. D. Cann, C. T. K. Roberts, R. G. Abraham, and W. B. Heberden, C.B. The hon. secretary and treasurer were unanimously re-elected, with thanks for their past services. The following committee were elected:—Messrs. W. Andrews, J. Baker, W. R. Baker, W. Charley, E. Cole, G. C. Crabbe, C. M. Collingwood, W. Merritt, C. H. Perkins, S. Radley, J. Rogers, and J. Weeks. The Secretary mentioned that the first lecture of the session will be held on Wednesday, the 6th of November. Thanks were expressed for the Mayor's kindness in granting the use of the room, and a vote of thanks to the chairman for presiding closed the meeting.

Earl's Court Exhibition.

The Jury of the Military Exhibition, 1901, have again awarded Messrs. John Laing and Sons, Forest Hill Nurseries, the gold medal and diploma for their decorations of the extensive gardens there.

Weather in Ireland.

The climatic conditions for the past month have been favourable, being dry, with an absence of frost. Although the tendency was to dull days, rain was noteworthy by its absence; in the preceding months the rainfall was fairly persistent. Last month the variation in temperature was slight.—A. O'N.

Personal

A complimentary dinner was given in honour of Mr. George Nicholson, late curator of the Royal Gardens, Kew, last evening (Wednesday), in Cannon Street Hotel, a goodly number of the most notable horticulturists attending. The meeting was of a private nature. It is sincerely hoped that the gathering resulted in a decision to appeal for a testimonial to Mr. Nicholson, to which we feel sure all gardeners would be only too delighted to have the opportunity to subscribe.

Reafforestation of Mountains.

Referring to the special Milan telegram in a recent issue of the "Pall Mall Gazette" on the proposed reafforestation of certain mountain lands in North Italy, an old member of the Royal Scottish Arboricultural Society writes: No country in Europe has suffered from the wanton and avaricious destruction of mountain forests as Italy, if we except Spain, and the terrible lesson that parts of Spain experienced in the autumn of 1893 does not appear to have stimulated practical reform such as the North of Italy is now projecting, and which France and Germany, especially Germany, have been systematically carrying out for many years. Many years ago the Montes de Toledo, which separate the waters of the Tagus on the north from those of the Guadiana on the south, were cleared of trees, and no reafforestation work was undertaken. In the autumn of 1893, after a severe, and even for Spain a protracted drought, there was an unprecedented fall of rain in those high regions of Castile. Petty streamlets became raging floods, and rivers overflowed their banks for many miles. Bridges were washed away, and thousands of cattle perished. No such visitation could have taken place had the mountain slopes not been cleared of timber. A few years ago the Forestry Department of the French Government spent £99,300 in mountain "reboisement"—that is, in planting up dangerous mountain sides and regulating the beds of mountain torrents, and in Germany work of that kind is systematically carried out at much annual outlay. No doubt many avalanches have their origin above tree-growth, but the presence of large masses of trees on the lower slopes regulates the flow of water and protects the villages below. Such forests also are protective against violent air currents, and are of great hygienic effect. A great deal of good work in the way of reafforesting waste land has been done in Scotland by Mr. Munro-Ferguson, M.P., and in Ireland by Lord Powerscourt (returns, on an average, 10s. per acre), but the work is sadly neglected by most landowners, and wholly by our Government.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. October.										
Sunday ...20	S.E.	deg. 38.2	deg. 37.9	deg. 57.9	deg. 34.5	Ins. —	deg. 49.0	deg. 53.6	deg. 55.2	deg. 30.0
Monday ...21	S.E.	40.9	40.4	55.1	33.0	0.09	47.5	52.8	55.0	28.0
Tuesday ...22	S.E.	47.4	46.2	51.1	37.8	0.07	47.9	52.3	54.8	31.5
Wed'sday 23	N.N.E.	41.5	41.3	53.1	39.8	—	47.9	51.8	54.5	33.5
Thursday 24	W.S.W.	43.4	42.9	53.3	33.0	0.05	46.8	51.5	54.3	26.7
Friday ...25	S.W.	43.6	42.7	52.1	38.9	—	47.2	51.2	54.0	33.0
Saturday 26	S.E.	35.1	34.8	44.8	31.8	—	45.8	50.8	53.8	26.5
MEANS ...		41.4	40.9	52.5	35.5	Total 0.21	47.4	52.0	54.5	29.9

A week of dull foggy weather.

Fernwood, near Birmingham.

Among the numerous residential domains situate within at least a ten miles circuit of Birmingham, Fernwood, the property of Alfred Antrobus, Esq., is undoubtedly one of the most charming and desirable. It is located in the pleasant pastoral suburban district of New Oscott, and can be readily reached by a five miles ride from Birmingham on the Midland Railway by alighting at Chester Road station, en route for Sutton Coldfield.

This compact, wooded, and pastoral estate of about fifty acres was purchased by Mr. Antrobus chiefly with the view to build a residence, and devote a portion of it to landscape gardening purposes. The portion selected for the purposes in question was what may be termed a sandhill, and of so uninviting a character that a less courageous speculator than the purchaser would have seriously hesitated ere resolving to attempt "to make the desert smile," and more than one long-resident friendly neighbour hintingly opined that the astute newcomer was "gone daft"

The drive assumes a serpentine direction, thus aiding the ascent of the hill throughout, the gradations being three in number, and are insensibly hidden from each other.

Rhododendrons, Berberis (Mahonia), with Male and Lady Ferns, Polystichums, &c., line the second half of the drive, the summit of whose banks are furnished with tall old Oak trees, Spanish Chestnuts, Larch, Scotch Pines, without unduly shading the plants beneath. Section number three is still more diverse, the banks on either side being clothed with masses of luxuriant Ferns growing amongst the terraced rockery, in association with hosts of spring flowering bulbous plants, and colonies of the pretty Cashmerian Primulas. Varieties of Ivy, Honeysuckle, Clematis, and other suitable climbers are trained upon the branches and trunks of some of the trees.

Arriving at the end of the carriage drive, the visitor is confronted by the handsome residence, the representation of which does not do justice to its architectural proportions, inasmuch as a presentment taken from the spacious lawn would have afforded a better idea of its handsome façade. Besides the handsome Araucaria seen in the illustration, the bushy shrubs in front of



FERNWOOD, THE RESIDENCE OF A. ANTROBUS, ESQ.

in entertaining such a project, and this was further emphasised when cart-loads of pebbles and stones were spread over the sandy surface of the steeply sloping ground with the view of consolidating and keeping it cool for planting purposes. One farm rustic declared that it was the first time he had seen stones used as "muck" before!

One of the most important and greatest of the undertakings was the formation of the picturesque and unique carriage drive, upwards of 300 yards in length, which necessitated throughout the major portion of the hill a deep cutting to secure an easy approach. The origin of the nomen "Fernwood" initiated from the fact that a large area of the hillside, bordering closely on the left-hand side of the carriage drive, is a forest of apparently upwards of two acres of tall trees, planted about 130 years ago, and a considerable portion of it undergrowthed with Bracken Fern.

In reverting to the carriage drive, and commencing at the lodge entrance, the visitor is confronted by a beautiful avenue of tall and well furnished Cupressus, fronted at intervals with luxuriant bushy plants of that hardy Bamboo, Arundinaria falcata, which lends grace to the formal contour of the Cypresses.

the vinery and greenhouse are dwarfed Irish Yews. Here, too, are young plants of the beautiful Forsythia suspensa. Attached at the back portion of the residence is a commodious aviary, devoted to a variety of feathered songsters, the owner's ornithological tastes, while another aviary is situated in a secluded spot in the grounds, and is apportioned chiefly for the largest species of songsters. Fronting the house is a spacious and beautifully kept velvety lawn.

Mr. Antrobus preserves the lawn intact from the introduction of trees or shrubs, and so as to allow of an unintercepted view of the grand fringe of coniferous and other trees and shrubs such as those here illustrated. The beautiful arboreal scene extends for upwards of 200 yards, from one end to the other of the lawn, and at its greatest width the lawn is about 90 yards from the carriage ring. Among the shrubs there is a beautiful specimen of the Rocky Mountains Blue Spruce (*Picea pungens glauca*, see illustration on page 401), about 16ft high, whilst to the left is a fine specimen of the yellow berried variegated Holly, and on the right a golden Cupressus, backed by a thriving tree of the Atlas Cedar (*Cedrus atlantica*), and in contiguity, behind, though not shown in the picture, is growing the beautiful specimen of the

Smoke Sumach (*Rhus cotinus*) recently figured in the Journal. So varied and numerous are the kinds of Conifers and other ornamental trees and shrubs forming the wide belting in question, that a detailed description would furnish an article alone of their respective attributes. A notable feature, however, is worthy of remark ere leaving this portion of the grounds, and that is, there is no semblance of a gravel walk intervening between the lawn and the bordering of trees and shrubs in question, but instead, a walk is conducted in a tortuous line through the collection of trees, from which views of the house and surroundings are here and there obtained. The idea is well worthy of adoption by intending planters. Extensive views of the country around is obtained from the upper windows of the house. In close proximity to the drawing room side of the house are two remarkably fine specimens of *Taxus adpressa*, each about 25 yards in circumference, and about 9ft high. Close by there is a magnificent high and wide Holly hedge, which separates the grounds from another field belonging to the estate, and it extends for about 150 yards in a downhill direction lodgewards.

The Wood with Ferns.

Leaving the foregoing terraced pleasaunce by a short winding path through a shrubbery of *Rhododendrons*, we cross the drive, and at once enter into what was, thirty-five years ago, a barren waste; but it afforded an excellent opportunity for the exercise of Mr. Antrobus' landscape proclivities. This portion of the grounds, or semi-wild garden, is separated from Chester Road by a high brick wall extending to a distance of about 250 yards from the lodge entrance, and parallel with it, in close contiguity, there is a closely planted row of tall trees, principally Beech and Birch alternately. This forms an effective screen from public view of the grounds inside. This row of trees forms half of the grass-walked avenue which runs the whole length of the wall, the counter row being composed of such trees as copper-coloured Beech, Weeping Birch, and tall Austrian Pines. Tall growing, hardy Ferns adorn the sides of the walk, while Irish Ivy mantles the walk. Altogether, this long and shady vista, when enveloped in its summer garb, presents a most strikingly grand appearance, and serves as a prefiguration of undisclosed other sylvan scenes.



Yellow fruited variegated Holly.

*Abies pungens glauca.**Cedrus atlantica.*
Cupressus Lawsoniana lutea.

ARBOREAL WEALTH AT FERNWOOD.

It forms an efficient barrier to the east winds, and shelter to the well-kept gravel walk inside.

One considerable portion of this estate is assigned to the culture of fruit and vegetables, comprising quarters that are subtly bordered with ornamental trees, dwarf hedges, flowers, &c., while other terraces are devoted to dwarf trees and shrubs, the plateaus, so to speak, being variously divided by grass or gravel walks. Swamp Oaks, Japanese Acers, Ghent Azaleas, dwarf Conifers, and a host of other ornamental shrubs and plants too numerous to mention, afford a continuous feast to the eye of the visitor. The too little known Spindle Tree (*Euonymus europæus latifolius*), with its beauteous crimson carpels, in long, pendant, axillary clusters, and purple-tinted, dark green leaves, does splendidly at Fernwood. Two very fine specimens of the Dovaston Yew (*Taxus Dovastonii*) are here also to be seen, while at the extreme lower end of the garden is a long line of Wellingtonia trees bordering a walk, and their tall boles are kept branchless in imitation of Scotch Pine trees, and so as to afford a contrast to the row of elegant specimens of *Pinus excelsa* behind them. Many of the Conifers and other trees and shrubs were introduced here in a small state from the nurseries of Mr. Antrobus' intimate old friend, the late Mr. Holmes, of Handsworth, Sheffield, as also from other sources.

Intervening between the foregoing and the lower side of the forest-wooded hill above is a broad dell-like space of ground, which has been planted with a large variety of ornamental flowering and other shrubs and trees.

Love of the Songsters.

We have already alluded to the artificial aviaries, but in the "wilds," by the fringes of this avenue, is Nature's abode for the feathered denizens of the field and the forest, and to invite their welcome presence numerous artificial nests have been fixed high on the trees. The dense tree tops afford a roosting resort for hundreds of appreciative songsters, and others of the genus *Avis*, during their nocturnal rest. One of the greatest pleasures in the daily life of their loving caretaker is in early morning to stroll through the intricate paths of the grove, or recline upon a favourite rustic seat enjoying his daily solitary briar pipeful of the "fragrant weed," whilst listening to their familiar chatter, or in the eventide to watch their arrival to the wooded sanctuary. Much more could be descanted upon Fernwood besides what I have already written; but to furnish an adequate description or picture of the estate would require the brush and palette of a Claude, a Gainsborough, or the pen of a Ruskin.—WILLIAM GARDINER.



Rhus Toxicodendron.

The poisonous effects of this American plant, known as the Poison Sumach, was painfully demonstrated recently, when A. Antrobus, Esq., Fernwood, New Oscott, near Birmingham, was making some cuttings for propagation of the plant. It was not, however, until several hours had elapsed that any ill effects were experienced, when his hands, face, and other parts of his body began to itch intensely, and his face and eyelids were much swollen. Medical treatment was resorted to, and after several days' confinement indoors, the swelling and pain subsided. On mentioning the circumstance to one of the employés, the latter remarked that he also once suffered considerably from contact with the same plant, and had ever since studiously avoided it. The symptoms, however, were comparatively slight, so that it was not mentioned at the time. It is said that some persons may handle the plant with impunity. A parallel is also found in *Primula obconica*. *Rhus venenata*, the Poison Elder, is said to be equally poisonous as its compeer.—G.

Raising Maple Seedlings.

Excepting the silver and the red Maple, which ripen their seeds in May, most all other sorts ripen theirs in October, and those desiring to raise seedlings should see to securing seeds as soon as ripe. Maple seeds require to be sown in autumn, or before the ground freezes to prevent the work. Unlike many other seeds, they will not keep in good condition in a dry state very long, and it is useless to so keep them and sow in spring, as they will not grow. But it is quite practicable to keep them in good condition till spring if mixed with slightly damp soil and kept in a cool place over winter. The seeds should be thoroughly ripe before gathering. With us, says the "Florists' Exchange," the close of September sees them ripe, when they may either be gathered or swept up as they fall. Nurserymen usually spread the seeds on the floor of a shed for a week or two after gathering and before sowing. Whether necessary or not, we cannot say, but it is, it seems, common practice to "let them dry a bit"; and, at any rate, treated in this way, and sown before winter comes, they do very well.

Purple-leaved Beech.

Writing to the "Florist's Exchange," Mr. Joseph Meehan states that on many of the older estates in America the purple Beech trees are amongst the grandest features of the country. The old-style purple, or blood-leaved Beech, makes but few branches when young, and the nursery customer looking for a nice formed specimen rarely finds it in one of natural growth of a height of 6ft to 8ft. But few branches are made at that period of growth. Later on, as age increases, the tree develops a beautiful shape, to the surprise of those unaccustomed to noticing it. A little pruning when the trees are small is a great help to them. There is another class of purple Beech of a different style of growth—the seedling class. Seeds of the purple Beech when sown give seedlings usually of dark purple colour, but of varying shades of purple. Some may be as dark as the noted Rivers' Purple, others not so dark, and occasionally one almost green. By sorting them, planting separately the lighter colours, nurserymen are able to offer these seedlings of a perfectly satisfactory dark purple colour. In nursery classification seedlings are called Copper Beech, and those grafted from the Rivers' variety, Purple Beech, though to the average customer the names are synonymous. A rather curious feature of the seedling Copper Beech is that it grows bushy and symmetrical from the start, without the pruning to accomplish this which the purple requires. Early autumn is a capital time to transplant Beeches. Carefully done, with some accompanying pruning, they are not hard to move. Perhaps an exception should be made in the case of the Fern-leaved Beech, which requires very hard pruning to have success with it.

Cratægus pyracantha.

At this season of the year, when the flowers only wait for the first sharp frost to put an end to them, and the leaves are bright with a hundred autumn tints, the brilliancy of the evergreen Thorn is strikingly effective. All the summer its dull, green leaves have been almost unnoticed, and its insignificant flowers have called for no comment. But now all is different, and the dull days are brightened by the clusters of showy berries on the wall. Yesterday I passed a residence the whole front of which is covered with *Cratægus pyracantha*. On every twig and spur was a bunch of brilliancy in the shape of scarlet berries, the effect of which calls for comment from every passer-by. As this is the season of planting, it is not unseemly to say a word for this old favourite, and when selecting climbers for the wall that flower in the summer, one that will be admired when all the former are over should not be forgotten.—H.

Lacquer Work.

This work is not only very pretty but easily done, though it requires care and patience in its execution. A little practice will suffice, and then one can make boxes which will be very acceptable as presents to the friends who like autumn leaves. After selecting those with the brightest reds and yellows, the leaves must be laid face down upon a blotter, and their veins and projecting stalks scraped away with a thin, sharp knife. They must then be placed between two blotting papers to dry, and left for two weeks, at the end of which time they will be ready for use. Now, one may turn their attention to the box, tray, screen or table one intends decorating, giving it a coat of black, made of lamp-black mixed with linseed oil and turpentine, applied with a flat brush. When the black is entirely dry, which will be soon, if plenty of turpentine is used, a coat of varnish is applied. However, unless the black is wholly dry, the varnish will mix with the paint. Before the varnish is quite dry the leaves must be arranged in groups or wreaths, first dampening the under side of the leaves to swell them to their natural size. When the entire design is quite finished (directs the "Fruit World"), the whole is varnished twice with the purest transparent varnish. The second coat follows as soon as the first is perfectly dry. A dainty line of gold leaf introduced around the edges or elsewhere adds to the fine effect.

Preparation of Grape Juice.

Each year, as the Grape season approaches, we are asked (writes a correspondent to "Green's Fruit Grower," America), how to put up Grape juice for family use. In proceeding, use only clean, well-ripened Grapes. I prefer to express the juice in an ordinary hand cider mill (same as making cider) by grinding the Grapes. The advantage is you get the juice at once, and that which is expressed by grinding is clear and retains so little foreign matter or pomace. It may be, by careful straining through double thickness light flannel, be immediately bottled, while that obtained from pressing the skins, pulp, seeds, &c., will require, besides straining, a little time to precipitate a sediment resulting from pressing. I sometimes filter through a few inches of clean washed river or creek sand. The sooner, however, it can be bottled and corked the less fermentation and the more of the peculiar Grape aroma may be retained. Whereas, if the Grapes are crushed in a tub or barrel I find it difficult or impossible to express the juice until fermentation dissolves the pulp, thereby losing much of the Grape flavour, but the fermentation cuts no figure in the keeping qualities, as I sometimes, for variety, let some ferment to a certain flavour, when I heat and seal it with the assurance that when opened in the months or years following the same flavour will prevail. I use the ordinary wine and beer bottles—carefully wash and drain them, fill to within about three inches of the top; set in ordinary wash boiler on the stove; put an inch of sand on the bottom or fit a turn board over the bottom to prevent the bottom of bottles overheating to break or give the juice a cooked flavour; fill the boiler with bottles as close as they will stand without crowding, and fill the boiler with cold water within about 4 inches of the top of the bottles. Lay on the lid and start the fire. Bring the water slowly to a distinct simmer, but in no instance allow it to come to a boil, as this, too, will cook the juice. Have your corks steaming. I use a one-quart fruit can; fill half full of water and put in the corks, lay on the cap, set along the boiler to heat and steam while bottles are heating.



[Coming Chrysanthemum Shows.]

The following fixtures are advertised:—

Battersea, Nov. 1st.	Leeds Paxton, Nov. 12th
Birmingham, Nov. 12th.	National Chrys., Nov. 5th.
Bournemouth, Nov. 13th	Parkstone (Dorset), Nov. 7th.
Bradford, Nov. 15th.	Scottish Horticultural, Edin-
Brighton, Nov. 12th	burgh, Nov. 15th
Cardiff, Nov. 5th.	Southampton, Nov. 5th.
Derby, Nov. 1st,	Stratford-on-Avon, Nov. 7th
Eccles (Manchester), Nov. 6th	West of England (Plymouth),
Evesham, Nov. 6th.	Nov. 5th.
Hanley, Nov. 6th.	Windsor, Nov. 8th.
Hull, Nov. 13th.	York, Nov. 13th
Kent County, Nov. 1st.	

General Cultural Remarks.

At a recent meeting of the Dulwich Chrysanthemum Society, Mr. Percy Waterer read the following paper on "Chrysanthemum Propagation and Cultivation":—

The lecturer, beginning with the preparation of the old plants for cuttings, advised the retention of only six suckers to a plant and the leaving some foliage on sorts shy in sucker-making. He did not believe it necessary to take cuttings on a stated date, or that side shoots were so bad as was often thought. With regard to the number grown, seventy he thought enough for a house 20ft by 8ft, and as to varieties, disappointment often followed from a large investment in new sorts. Cuttings should be about 3in long, hard and short jointed, and should generally be inserted during December, but sorts like Mrs. H. Weekes and Florence Molyneux are better struck later, and the break bud selected. Use a thumb pot for each cutting, label, and place on a bottom of cocoa-nut fibre or ashes in small frames, in a cool house or frame. The soil should be equal parts of loam and leaf mould, with sharp sand to keep open and silver sand in hole for cutting. The plants should be slightly syringed, and the glass occasionally wiped, and in three or four weeks the glass may be gradually removed.

In potting frequent shifts are inadvisable. When pots are filled with roots they should be potted on. Thumbs to large 60, then 32, and finally 16 or 12, or for the strongest, into 72, then 48, 24, and lastly 12 or 8. More shifts are harmful and unnecessary.

The most forward plants should be ready for first shift, about the middle of February, in soil three parts fibrous loam, one part each leaf mould, rotten manure and sand, and a little wood ash and dusting of bonemeal. Pot firmly, and at first little water is required, but plants may be lightly sprinkled overhead. Notes taken during a number of seasons lead to the conclusion that the importance of pinching and taking buds at specified dates is over-estimated, the season causing such variations in the plants. The best practice is to grow only those sorts which experience proves throw the best buds naturally at the period required. Decorative varieties should be pinched when 6in or 8in high, and the shoots when 5in to 7in long, the centre branches tied to a stake and the outer branches to the inner ones. By the end of March the most forward plants will be ready for second shift. Soil, four parts stiff loam, two of leaf mould, one each of good rotten manure and sharp sand, a dusting of wood ashes, bone flour, and superphosphates. A little charcoal and broken oyster shells may be added. Pot more firmly, plants require staking, and should be stood in an ordinary frame. After a few days give plenty of air, and keep fly down with tobacco powder. As the plants grow, frames may be raised with bricks, and in favourable weather the lights removed. During April, syringing with quassia or an insecticide will keep off the fly of the celery maggot.

Final Potting and First Break.

From the middle of May to June 1 final potting should be done. Potting soil: five parts of stiff fibrous loam, one-and-a-half leaf mould, one dry stable droppings, one each sand, old mortar and wood, one-half part pigeon manure, a few quarter-inch bones, and a dusting of bonemeal, should be prepared two or three weeks in advance. A piece of perforated zinc 2in square should be put in bottom of pot to exclude worms, then a flat oyster shell, followed by 1in or 2in of crocks or broken bones. Pot as tightly as possible, and get as much soil as you can under the ball of the roots. Shelter pots from heavy rains if possible, and later place in summer quarters where possible 2ft from

centre to centre and rows 4ft or more apart. Place four or five oyster shells on top of soil to prevent evaporation, and put in final stakes. When the plants break, leave four shoots first, later removing the weakest. Syringe overhead whenever favourable. Remove shoots and suckers. Dust with tobacco powder, and trap earwigs with hogweed. When plants are thoroughly rooted, feed with weak cow manure, following with horse and sheep, with intervals of soot water, giving it clear about the colour of pale sherry. One of the best manures for horticultural purposes is sun-dried blood, if obtainable, but vitriolised blood, fresh, is dangerous, and should be kept at least twelve months before using. During August top-dress with fowl or pigeon manure a year old, or Peruvian guano, mixed with eight times quantity of fine loam, covering old soil 4in deep. Repeat this before housing. Remember that the foliage denotes the state of health of the plant, and if sickly looking give soot. Water thoroughly, and only when required. Tapping with the knuckles will indicate the state of soil. Heavy mists during August often favour the spread of "rust." The Wye mixture, applied with a fine syringe, is a good preventive. Bought cuttings may be dipped in same mixture, and an occasional spraying given to plants during season. Mildew may be kept down with flowers of sulphur dusted on leaves, especially the under sides. A green insect the size of house fly is troublesome and should be caught.

Crown Buds.

Crown buds, taken about first week in August, and second crown, or terminals, about third week in August, usually give best results. Other growths should be rubbed out as soon as large enough to bundle. Early in September the houses should be cleaned out, painted, walls limewashed, and pipes sulphured, and any blooms showing colour may be housed, and the remainder on any sign of frost. Give all the air possible, lumps of fresh lime will absorb moisture. If favourable weather, syringe the foliage a little. Spread out plants as much as possible for first ten days, remove buds developing large round ones, and support any weak buds with split bamboos. Some of incurved varieties are improved by allowing heads to hang down. When plants have been housed a month, too luxuriant foliage may be thinned. If plants are backward a week before a show, a watering of nitrate or sulphate of ammonia, ½ oz. to a gallon, will be beneficial. On the conclusion of the paper a number of questions referring to some of the knotty points in cultivation were dealt with in a manner that the vast experience of the lecturer made doubly valuable, and a very interesting evening was concluded by the usual, but in this case certainly most well deserved and hearty, vote of thanks to the lecturer.

New Varieties at Chelsea.

The Chrysanthemums in the Royal Exotic Nursery at Chelsea are resplendent at the present date. Amongst the novelties offered last year for the first time, we noticed something like a score in Messrs. Veitch's collection. Some of these are slightly superior to varieties of the past, but, honestly speaking, there is mighty little to choose between the most up-to-date and the best of half a dozen years ago. Certainly we recognise the fact that for the continuation of prosperous trade among the growers who specialise the flower, it is necessary that a yearly stock of "novelties" be distributed, and this also ensures the continuance of interest in the culture of this, the "Golden Flower" of the Greeks. We want more varieties of the Florence Molyneux or Miss Alice Byron type, whose flowers are so grandly massive, yet withal so charmingly beautiful, that they command admiration. Only the best should be honoured, and once recognised, why not try to improve upon them, and send out the improved forms backed with the prestige that may already have been gained?

Mr. Weeks, the grower of these plants at Chelsea, is in no way conceited with his representatives this season. The plants are robust, stout, healthy, and perfectly clean, but the buds are not opening to his satisfaction. In another year but one, he will have the freedom and more genial influences of the Feltham zephyrs to aid him, and under such conditions we generally expect finer results.

The lovely Lily Mountford, with creamy centre and pink shading over the lower petals, stands out well; we find it kindly spoken of wherever we go. Lord Roberts is a rich crimson Japanese variety, with golden reverse; no one could choose a finer variety of its type. Ernest Bettsworth, named in honour of a C.I.V. who went forth for his country and came back unharmed, furnishes a bright and attractive rose purple flower, General French is the title of a yellow representative with beautifully full flower-heads and finely sinuous petals, the lower ones of which droop slightly. This we take to be one of the most meritorious of last year's introductions. Kimberley may be recalled, too, from the notice given to it on its début. In depth of yellow it equals Soleil d'Octobre. Earl of Arran furnishes another yellow Japanese, but which we will pass over. Hooper Pearson is two years known. It was expected to cause universal

sensation when first we saw it, but as a variety it is so difficult to produce in perfection that very few typical blooms have ever been shown. As a purely decorative Chrysanthemum, however, we recommend it with the greatest earnestness.

Mr. George Mileham will assuredly be staged at most of the leading shows; it is one to be watched. There is also W. R. Church, deep glowing crimson above, bronzy reverse to the petals, and charmingly upturned tips, pointed-over with a golden hue. Reverend Douglas is one of the most easily grown, producing its soft creamy yellows with but little coaxing. Mrs. Fripp, Mrs. R. Darby (a good sort), and Mrs. Greenfield, the latter an improvement on Phœbus, are each specially worthy of being noticed. Dolly Clyde patterns after the Mrs. Weeks type, having broad, snowy white petals. Matthew Smith and Mr. J. Thorneycroft, both chestnut, or russety-crimson in colour, are very similar. Where one is, the other could be done without, though both are excellent varieties. The foregoing comprise the élite of the newer Japanese Chrysanthemums at Chelsea. Madame E. Rogers, the green variety, still figures prominently. The only new incurved representative worthy of being recommended is "The Colonel," a rich crimson-chestnut coloured flower, with bronzy reverse.

And now we will conclude with the names of the varieties grown most liberally for cut flower purposes as opposed to those for exhibitions. These include Rycroft Crimson, Souvenir d'une Petite Amie, Vivand Morel, William Tricker, G. Shrimpton, Emperor of China, Madame Carnot, Etoile de Lyon, Lady Selborne, Source d'Or, Elaine, Madame B. Pigmy, William Seward, Hooper Pearson, and O. J. Quintus, red and white. At Feltham it is intended to erect a large 100ft. show-house with two divisions, where it is hoped the plants and blooms will be seen to the best advantage.

Waterlow Park's Collection.

In the large conservatory and vinery adjoining Waterlow Park, Highgate, London, there is at present open to the public a splendid exhibition of Chrysanthemums. There are on view nearly 3,000 plants, comprising about 250 varieties. The flowers have been staged by the London County Council's gardeners to the very best advantage, and already quite a large number of persons have inspected the show. The flowers will perhaps be at their best in a very few days' time; many good early buds were lost during the hailstorm in July. The exhibition will probably remain open for six weeks.

Hypericum patulum.

The Hypericineæ, or St. John's Wort order of plants, furnish a large number of species of deciduous or evergreen shrubs and undershrubs, some of which are among the most valuable hardy plants grown in British gardens. If we name only *H. calycinum*, the (true) Rose of Sharon, all gardeners will endorse our expressions. There is another we would bring more prominently to notice, and that one we illustrate on page 404, named *Hypericum patulum* (syn. *H. oblongifolium*). It is a very free-flowering, hardy species, native of Japan. In height it attains 6ft or so, and has round, purplish, herbaceous stems. The leaves are ovate-lanceolate and slightly "dotted." When the more expansive specific name "*oblongifolium*," was discarded we are unable to say, but *H. patulum* is the only name now botanically recognised. The species seeds freely, and from these it can readily be propagated. Given a sunny or fairly open position, with a moist rooting area, the plants will flourish.

Buried Gardens and Orchards.

Some account was recently published in the "Daily News" of the remarkable excavations which have been made in the little-known land of Chinese Turkestan by the conductors of a recent expedition. The remains which Dr. Stein describes have been hidden by the sands for the last 2,000 years. They are particularly interesting for the reason that the country wherein they have been unearthed was, in ancient times, on the great commercial route between China and Europe. Greek and Roman traders, long before the Christian era, traversed the route through the province where the archæologists have begun work. Gardens, avenues, orchards, all neatly arranged, have presented, when freed from their sand heaps, the appearance they bore ages ago. Chinese Turkestan will some day be Russian territory. There, as in Western Turkestan, which has long been Russian, the Tsar's servants will have a fine opportunity of restoring to a country, once populous and rich, its vanished prosperity. Chinese Turkestan became a desert because—so it is surmised—the irrigation was insufficiently developed to cope with the advancing sand dunes. But the Russian engineers are doing splendid work in reclaiming, by means of canals, their own Turkestan from the wilderness.

Societies.

Royal Horticultural—Drill Hall, October 29th.

The meeting on Tuesday last was one of a very superior and interesting character, embracing remarkably fine groups of fruit, vegetables, foliage plants, Conifers, Aucubas, hardy cut flowers, Orchids, and a splendid exhibition and varied groups of Chrysanthemums. The day almost pitch-black, and necessitated the lighting of the gas in the hall. Nevertheless, there was a large turn out of habitués, and they were certainly well rewarded. Our detailed report includes every feature worthy of notice. In the afternoon Prof. George Henslow, M.A., delivered a lecture on "The Importance of Mechanical Forces as Displayed by Plants" before a representative audience.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, J. Wilson Potter, H. Little, J. W. Odell, W. H. Young, F. J. Thorne, H. J. Chapman, H. A. Tracy, E. Hill, Jas. Douglas, H. Ballantine, H. M. Pollett, and R. Brooman White.

Mr. C. Stocking, gardener to C. H. Feiling, Esq., Southgate House, Southgate, contributed a bright and charming group of Orchids, in which forms of *Cattleya labiata* were very conspicuous. There were also some fine *Miltonias*, *Cypripediums*, *Odontoglossums*, and *Oncidium*s.

Mr. G. Whitelegge, gardener to J. Bradshaw, Esq., The Grange, Southgate, staged some handsome *Cattleyas*, including John Baguley, aurea, Mantini, Harrisonæ alba, labiata G. Whitelegge, and l. glauca. Mr. Norman Cookson, Wylam-on-Tyne, sent *Cypripedium Lawrebel*, Oakwood variety.

A small collection of Orchids was arranged by Messrs. J. Veitch and Sons, Limited, Chelsea. There were *Lælio-Cattleyas* Semiramis, Dominiana, langleyensis, Statteriana, Decia, and Ophir; *Cattleyas* Portia, Fabia, Bactia, and Brownia Veitch's variety. *Lælia* Mrs. M. Gratrix was also included.

Mr. W. H. Young, Orchid grower to Sir Fred Wigan, Bart., Clare Lawn, East Sheen, staged cut blooms of *Cattleya gigas* Wigan's variety, *Lælia Olivia*, and one or two others.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. Chas. T. Druery, H. B. May, James Walker, R. L. Eary, G. Reuthe, Jas. Hudson, J. F. McLeod, J. Jennings, Chas. Jefferies, C. R. Fielder, Chas. Dixon, W. P. Thomson, Chas. E. Pearson, H. J. Cutbush, Geo. Gordon, Chas. E. Shea, J. Fraser, J. W. Barr, R. C. Notcutt, E. H. Jenkins, Wm. J. James, George Nicholson, Edward Mawley, George Paul, and E. T. Cook.

Shrubs.

Mr. John Russell, Richmond Nurseries, Richmond, on this occasion set up a group of the Aucubas which his grower fruits so exceedingly well. The plants were bushy and mostly dwarf, though various sizes were presented; each was well crowded with crimson berries. The varieties *A. japonica vera*, *macrophylla variegata*, *bicolor*, and *longifolia* were prominent. (Bronze Flora Medal.)

Messrs. John Waterer and Sons, Limited, American Nurseries, Bagshot, Surrey, had choice and useful dwarf Conifers and Hollies, averaging 3ft or 4ft in height. The shrubs were models of good culture, being fresh, well-balanced, and nicely furnished. Such varieties of *Cupressus* as *Lawsoniana versicolor*, *L. densa gracilis*, *L. lutea*, *L. variegata*, *obtusa nana aurea*, and *erecta viridis*, *macrocarpa lutea*, were included, together with good specimens of *Abies Alberti*, *Juniperus japonica aurea*, *Retinospora pisifera aurea*, *Juniperus Sabina*, *Thuja occidentalis aurea*, and other subjects. The golden-fruited Holly was presented in fine condition, bearing masses of its bright berries.

Plants.

P. Purnell, Esq., Woodlands, Streatham Hill, S.W., set up a group of flowering and foliage greenhouse and stove plants, mainly including *Celosias* of the pyramidal type, *Cocos Weddelliana*, *Eulalia japonica variegata*, Maidenhair Ferns, Primulas, and Palms.

Messrs. Thos. S. Ware, Limited, Hale Farm Nurseries, Feltham, staged a wonderful array of strongly flowered *Nerines* of the varieties *Planti*, *Fothergilli*, *judica rosea*, *pendula* (white), and others. They had also hardy flowers, including the new *Arctotis grandis*, and *Lilium sulphureum*.

Messrs. James Veitch and Sons, Limited, sent up a group of winter flowering *Begonia* Mrs. Heal. The brilliance of the amaranth-crimson flowers was grander than we hitherto remember to have seen it, and the bushy, floriferous, healthy appearance of the plants spoke well for the superiority of the general stock.

Codiaeums (Crotons) in variety, and richly coloured, were staged by Messrs. Robert Green, Limited, 28, Crawford Street, W. The plants were worthy of all praise. (Silver Banksian Medal.)



HYPERICUM PATULUM.

Messrs. John Peed and Sons, Roupell Park Nurseries, Norwood Road, S.E., seem as strong and successful with the "Gloire" type of Begonias as with the summer flowering tuberous varieties. On this occasion they staged the pale, beautiful, rose-pink sport named Mrs. Leopold de Rothschild, bearing masses of flowers on exceedingly stout, vigorous, and healthy plants in 5in pots.

Mr. Thos. Rochford, Turnford Hall Nurseries, staged a new variety of Begonia, a sport from Gloire de Lorraine, whose attributes secured for it an Award of Merit. The variety seems to be larger in its several parts, as stems, flowers, leaves, than the parent hybrid form. The large flowers open wide, and are very graceful, the petals being pure white toward their base, and peach-pink at the edges. It is a decided acquisition, and all speak well of it. (Silver Banksian Medal.)

Roses, and Hardy Flowers.

Messrs. Barr and Sons, King Street, Covent Garden, were the only exhibitors of herbaceous hardy cut flowers, staging Montbrisia D. A. C. Or. Scenzostylis eocinea, a very bright crimson Iridaceous flower, suitable for pots or the hardy border, together with Asters, Kniphofias, Pentstemons, Crocus asturiensis atropurea, a pretty violet colour variety, and Chrysanthemums.

A group of the new bedding Tea Rose named Corallina, was staged by Messrs. Wm. Paul, Waltham Cross. We are now able to say from experience that this newcomer is one of the best we have at present. It is capital for late flowering purposes, and is very free. The stems and foliage are of a dark, purplish colour, and the flowers are coral crimson.

Mr. L. J. Draps-Dom, 76, Drève Sainte Anne, Laeken, Brussels, sent up eight specimen plants in various sizes of two new Dracaenas, one named Desmetiana, the other Mr. J. V. Daele. The first is a broad-leaved species, erect in growth, tinted creamy-pink, but mainly deep, glossy green. A Silver Banksian Medal was awarded.

Chrysanthemums.

Mr. K. Drost, Kew Nursery, Richmond, had a very creditable group of bush-grown Japanese Chrysanthemums for purely decorative purposes, and was accorded a Bronze Banksian Medal. Messrs. Veitch had also a very imposing group, notes of the varieties of which are provided on another page. (Bronze Banksian Medal.)

A group of single seedling varieties came from G. Ferguson, Esq., The Hollies, Weybridge, whose gardener is Mr. F. W. Smith. The blooms were of large size and all-round good quality. Mr. Smith is doing a useful work in applying himself to this section, and we predict much success on his labours if he will but continue in the way he has begun.

Messrs. Wells and Co., Earlswood Nurseries, Redhill, Surrey, came out in strong force with plants and cut flowers, and were successful in arranging these with great artistic skill. It was difficult to choose one or more varieties in favour of others, and for the present we will only name Market Red, Matthew Smith, Lord Ludlow, Ben Wells, Mrs. T. W. Pockett, W. R. Church, Mine. Herrewége, white or soft cream; Mrs. Alex. McKinley, rich golden bronze, shaded with red; Marquis V. Venosta, and Phyllis, a grand bronzy-yellow. The singles, which were numerous and very fine, greatly aided the group. All through the afternoon these lovely blooms drew praise from a large portion of the visitors. (Silver-gilt Flora Medal.)

Mr. Henry Weeks, Thrumpton, staged blooms of seven new varieties, some of which had received at the N.C.S. committee meeting on the day previous.

Messrs. G. Prickett and Sons, South Tottenham, N., received an Award of Merit and Bronze Flora Medal for a group of a Chrysanthemum named Bronze Soleil d'Octobre, a good sort, and likely to be very much taken to. (Bronze Flora Medal.)

Miss Easterbrook, Fawkham, Kent, again displayed her skill and exquisite good taste in floral arrangements by exhibiting a basket with coloured leaves, berries, and Clematis with hairy carpels, the presentment being very rich and fine. An accompanying basket of Chrysanthemums was likewise a masterpiece of taste and good judgment in composition. (Silver Banksian Medal.)

Mr. W. J. Godfrey, Exmouth, Devon, had an even set of Japanese blooms, including Sensation, a very rich, golden-bronze (A.M.); Bessie Godfrey, canary yellow (A.M.); Godfrey's Masterpiece; H. E. Hayman; Mme. P. Radaille, white; Exmouth Rival, the richest crimson we are acquainted with; Nellie Stevens, an attractive cinnamon old gold; Edward VII.; Golden Eagle; The King; Kimberley; Queen Alexandra; Exmouth Crimson; Godfrey's Pride, crimson above, bleached bronze on the incurving reverse, and many others. (Silver-gilt Banksian Medal.)

Messrs. Cannell and Son, Swanley, sent the varieties Mr. M. J. D'Arcy, Mme. Constance Welker, Blanda, Mrs. Harry Emmerton, and others. They received an Award of Merit for Pompon Miss May Williams, a rose-lilac variety.

Fruit and Vegetable Committee.

Present: George Bunyard, Esq. (in the chair); with Messrs. H. Balderson, J. W. Bates, S. Mortimer, Alex. Dean, Wm.

Pope, Wm. Fyfe, M. Gleeson, George Kelf, F. Q. Lane, J. Jaques, James Swat, J. Willard, George Wythes, G. Norman, H. Somers Rivers, G. Shaw Blaker, George T. Miles, W. Wilks, and Charles Herrin.

A splendid dish of Tomato Chiswick Peach from Percy Tullock, Esq., Brighton, brought him a vote of thanks. Few of the general public know there are such things as yellow Tomatoes.

A dish of Strawberry "St. Joseph" was sent from Sir D. L. Broughton, Bart. (gardener, Mr. W. Wingfield). Doddington Gardens, Nantwich. These were poor and insipid, being only half ripe; we have much better than these in London here.

Van Diemen's Quince was staged from Messrs. J. Veitch and Sons, Limited, as was the Pear-shaped Portugal and Borgeant varieties.

Messrs. Cross and Son, Wisbech, Norfolk, sent Pear "Grey-Friar," a splendid variety largely grown in the Wisbech district.

Fruits of Diospyros Kaki, the Date Plum, were staged from the Earl of Ilchester's garden, Holland House, Kensington, where the plants are grown and fruited in the open air.

Mr. Charles Ross showed two new Apples, one named "Cropwell," the other "The Houblon," the latter having been shown grandly at the recent Palace fruit show. The bunches of Reine Olga Grapes which Mr. Will Taylor, of Hampton, ripens in the open air, were staged in good condition on this occasion.

A Vote of Thanks was received by H. Sturges, Esq. (gardener, Mr. W. Peters), Givons Gardens, Leatherhead, for three bunches of a Grape named Givons Maroc.

The County Experimental Gardens, Droitwich (chief instructor, Mr. James Udale), sent forward a most interesting and instructive exhibit of dried fruit, including Apples, Pears, Prunes, Blackberries, &c., the former in a pared, cored, and sliced state. Tables showing the fresh weight in pounds, dry weight, average temperature and time taken to dry the various fruits and varieties were presented. We require to see more of such interesting exhibits, and all more liberal instruction in this phase of fruit preserving. Perhaps Mr. Udale, who is a regular contributor to the Journal, may have time to pen a few notes on this most interesting and useful subject.

Roger Leigh, Esq. (gardener, Mr. George Woodward), Barnham Court, Teston, gained his yearly Gold Medal for a grand collection of Apples and Pears. He did very well (as he always does) at the Palace fruit show, and when we state that these 120 dishes were the pick of his Palace fruits, it will be understood that scarcely could a finer collection be staged. Some of the samples might have been better coloured, particularly the Blenheims, but on the whole the colour was really an astonishing feature. Mr. Woodward was bantered a good deal, some of his friends suggesting frankly that he had six trees of Peasgood's Nonesuch, and grew one fruit on each of them! But Mr. Woodward crops his trees, not heavily, but with moderation, and in every way treats them with thoughtfulness, skill and care; thus his success. (Gold Medal.)

Vegetables.

Messrs. H. Cannell and Sons, Swanley, Kent, staged a magnificent collection of grandly cultivated vegetables, and received the Silver-gilt Knightian Medal. Some of the varieties were Cannell's Mammoth Leek, Cocoa-nut, Cranston's Excelsior, Reading Improved, and Ailsa Craig Onions; Best of All Beet, Cannell's First Prize Parsnips, Perfection Intermediate Carrots, and Cannell's Improved Defiance Cabbage. Besides this, they staged a collection of sixty dishes of Potatoes. We really think that such a magnificent collection of culinary produce as this, even if it is from a trading firm, deserves the highest award, viz., the Gold Medal, and no doubt had the same exhibit of produce come from some other firms with closer influence with the committee members, the Gold Medal would certainly be awarded.

Another collection of vegetables was sent by the Earl of Carnarvon (gardener, Mr. W. Pope), Highclere Castle, Newbury. Forty-four dishes of Onions, in all, were included. Mr. Pope's Autumn Giant Cauliflowers were perfect; so were his Cucumbers var. Lockie's Perfection, Sutton's Dwarf Gem Brussels Sprouts, Leeks, Turnips, and Celery. (Silver-gilt Knightian Medal.)

Certificates and Awards of Merit.

Cattleya labiata G. G. Whitelegge (G. Whitelegge).—The sepals and petals of this variety are pure white; the lip has a fimbriated white margin with a purple patch extending into the throat and lemon side lobes (Award of Merit).

Cattleya labiata glauca (G. G. Whitelegge).—A very peculiar variety. The colour is lilac, very soft in the sepals and petals and deeper in the lip (Award of Merit).

Cattleya Bactia (J. Veitch & Sons).—This is from a cross between C. Bowringiana and C. guttata; the sepals and petals are satiny deep rose purple; the flat spreading lip has a thin white margin round the crimson central patch (Award of Merit).

Cattleya Brownia, Veitch's var. (J. Veitch & Sons).—A superb variety; the sepals and petals are very rich rose; the lip has margins of this colour with rich yellow in the centres (First Class Certificate).

Cattleya gigas, Wigan's var. (W. H. Young).—A superb variety; the sepals and petals are pale blush, and the magnificent lip has a

beautiful fringe of white round the crimson centre, the side lobes are soft lemon (First Class Certificate).

Chrysanthemum Exmouth Crimson (W. J. Godfrey).—A magnificent Japanese; the inner colour of the florets is very rich crimson and the florets pale buff (Award of Merit).

Chrysanthemum The King (W. J. Godfrey).—A fine reflexing Japanese; the colour is red with slight yellow tips and a bright yellow reverse (Award of Merit).

Chrysanthemum Bessie Godfrey (W. J. Godfrey).—A chastely beautiful soft yellow variety (Award of Merit).

Chrysanthemum Sensation.—An incurved Japanese with broad flat yellow florets lined with red (Award of Merit).

Chrysanthemum Miss Ma Williams (H. Cannell & Sons).—A fine Pompon; the colour is soft rose (Award of Merit).

Chrysanthemum Bronze Soleil d'Octobre (G. Prickett & Sons).—A bronze sport from a well-known and useful variety (Award of Merit).

Chrysanthemum Madame Herrewege (W. Wells & Co., Ltd.).—A fine reflexing Japanese, with long florets; the colour is pale sulphur (Award of Merit).

Grape Reine Olga (W. Tayler).—A grand Grape for outdoor culture; the berries are large, of good flavour, and crimson colour (First Class Certificate).

Lælio-Cattleya Ophir (J. Veitch & Sons).—This bigener is from a cross between *Lælia xanthina* and *Cattleya Dowiana aurea*; the sepals and petals are soft yellow, and the lip rose with red and apricot suffusions (Award of Merit).

Lælia Olivia (W. H. Young).—This hybrid (*L. crispa* and *L. xanthina*) has already received an Award of Merit; it has improved with age, and is very rich yellow in the sepals and petals, and red in the lip (First Class Certificate).

National Chrysanthemum.—October 28th.

The following new Chrysanthemums were certificated at the committee meeting held in the Royal Aquarium, London, on Tuesday last:—

Japanese Varieties.

H. E. Hayman (W. J. Godfrey).—A very massively built flower with incurving tips. The petals are almost half an inch broad, and sinuous. The colour is deep rich yellow at the base, becoming shaded with russety-red toward the apex; reverse light bronzy-buff (First Class Certificate).

Godfrey's King (W. J. Godfrey).—Another large flower, with plenty of petals to ensure a massiveness. Here again the tips curl upward and display a bright golden reverse. The upper colouring of the petals is a dull, bronzy-red. The variety is a very handsome one, and much enlivened by the golden reverse colour (First Class Certificate).

Kimberley (W. J. Godfrey).—An exquisite variety of the Sunflower type, but softer and more attractive in colour. The petals are $\frac{1}{4}$ inch broad, tapering to the apex, and have mostly a downward droop. The build of the blooms is broad, massive and deep (First Class Certificate).

Godfrey's Pride (W. J. Godfrey).—An incurving Jap, with rich, lively amaranth colour above, and bleached bronzy reverse. The latter colour is quite exceptional and difficult to describe, but "novel," and that's the great thing (First Class Certificate).

C. Penford (C. Penford, Lee Park Gardens).—A very closely-built, incurving Jap, dull red above, with old-gold coloured reverse (Award of Merit).

Violet Lady Beaumont (N. Molyneux, Rookesbury).—Possesses a strikingly deep and rich blood-red crimson colour, bronzy-yellow reverse. The habit is somewhat stiff (First Class Certificate).

Mrs. E. Hummel (H. Weeks).—Quite distinct in colour and of very attractive, or, we should say, æsthetic form of build. The colour is mauve-amaranth, displaying much "light and shade" effect (First Class Certificate).

George Lawrence (H. Perkins, Henley-on-Thames).—A true incurved Japanese variety, of moderate dimensions, round in build with broad petals variously twisted and disposed. Colour, deep rich golden bronze (First Class Certificate).

Mrs. George Lawrence (H. Perkins).—A variety very much like *Oceana*, with somewhat drooping petals; good colour, breadth and depth, but lacking in finish (First Class Certificate).

Liverpool Root and Fruit Show.

The following portion of the report dealing with the above show reached us too late for our issue last week:—

Sion House was the best late, round Potato, from the executors of Peter Davies, Esq. Probably the best dish in the show was Scottish Triumph, a long flat variety, classed as "any other shape except kidney or round," Mr. G. Ashley deservedly gaining a first and special. Mr. B. Ashton had excellent Reading Russets, as the best coloured round. The executors of Peter Davies, Esq., Peerless Rose, as an early or second early kidney; whilst Leda was in form amongst the coloured kidneys. King of Russets was the premier coloured round, from Mr. Oldfield. Reading Giants, weighing over 16lb the six, were the heaviest in the show, Mr. Needham being the winner.

New Potatoes.

These formed a magnificent feature. Early or second kidney, Mr. W. L. Hutton with Majestic; early or second round, Mr. B. Ashton with beautiful Daniel's Special. Late kidney, first and special, Exeelsior, from Mr. J. Johnson; late round, Mr. G. Pinnington with grand Charles Fidler perfect in every point.

Special Prizes.

Messrs. Sutton and Sons.—Executors of Peter Davies, Esq., first with Windsor Castle, Satisfaction, and Abundance, the same exhibitors winning with Satisfaction. Mr. B. Ashton had the finest Reliance.

Messrs. Webb and Sons.—Mr. B. Ashton for Wordsley Pride, as the premier kidney; also for Renown, as the finest early round. For a late kidney Mr. D. Oldfield with Motor, and a late round Mr. Reason with Goldfinder.

Messrs. Fidler's.—Mr. Oldfield with Charles Fidler; any shape except round, Mr. J. R. Newton with Webb's Empire. The best round was C. Fidler from Mr. J. Halsall, Mr. Oldfield securing the prize for General French; Sirdar secured single dish honours; Mr. J. Halsall winning with Langworthy.

Fruit and Vegetables.

It is always a great feature, and worthy of mention. Warner's King and Peasgood's Nonesuch were the premier Apples shown by Messrs. Guy and Mackarell; the best single dessert being Cox's Orange Pippin, and Ribston from the same exhibitors. Messrs. E. H. Wood and W. Mackarell won in the stewing Pear classes with Uvedale's St. Germain. Marie Louise took the prize in each instance as the best dessert Pear, and Mr. B. Ashton won with superb Museat of Alexandria.

Vegetables were magnificent: the Cauliflowers that gained first and special, and the admirable dish of Green Peas from Mr. Ashton being most creditable. The show was a huge success in every respect.—R. P. R.

Beckenham Horticultural Society

On Friday evening, October 25, Mr. H. J. Chapman, of Cambridge Lodge Gardens, Camberwell, lectured to an appreciative assembly of members and friends on "Orchid Hybridisation." Mr. T. W. Thornton ably presided. The lecturer, in commencing, referred to the late John Dominy, of Messrs. Veitch and Sons, as chief among the pioneers of Orchid hybridisation, and whose work prominently remains. He proceeded to state that the using of superior forms as parents is essential to secure the best results, and that the seed-bearing plant should be strong. For sowing of the seed Mr. Chapman advised using pieces of rough sawn wood for a seed bed, such as a section of a scaffold pole, this fastened in pot or pan and suspended near the roof-glass, and his method of applying water by a spray (similar to that used by a hair dresser), the pricking off the young plants, the pots, compost, and atmospheric surroundings most suitable, all this the lecturer dealt with to the minutest detail, and was intently followed by his hearers. The advantages claimed for Orchids from seeds generally is their greater vigour, being as it were more acclimatised, and so less liable to deterioration as is now so noticeable with many imported plants. A number of water colour drawings by Miss N. Roberts, the talented artist to the Orchid Committee of the Royal Horticultural Society, was placed on view by the lecturer and used for reference. A hearty vote of thanks was accorded Mr. Chapman for his most instructive lecture.—T. C.

Reading Gardeners' Mutual Improvement Association.

The fortnightly meeting of the above association was held on the 21st inst., when Mr. J. C. House, of Westbury-on-Trym, Bristol, delivered a most interesting lecture on "Violets and their Culture" before a large attendance of members. Mr. House said the Violet is a profitable flower to grow, as there is always a good sale for a good Violet. Culture was dealt with in an exceedingly practical manner. The sorts recommended to be grown were: singles—La France, Princess of Wales, Luxonne, California, Admiral Avellan, White Czar; doubles—Marie Louise, Mrs. J. J. Astor, Lady Hume Campbell, White Comte de Brazza, Duchess of Edinburgh. A discussion followed, in which Messrs. Neve, Harris, Barnes, Powell, Bright, Prince, Goodman, Davidson, Fry, and Alexander took part. A vote of thanks was accorded to the lecturer and to the following exhibitors: Mr. G. Wieks, The Gardens, Broad Oak, for a group of well grown Gloire de Lorraine Begonias; Mr. A. G. Nichols, exceedingly fine blooms of Violets (Admiral Avellan, Wellsiana, Marie Louise, and La France); Mr. Harris, The Gardens, Hardwick, pots of Violets (Marie Louise); Mr. G. Stanton, Park Place, bouquet of Princess of Wales Violets, and pots of *Brachycome iberidifolia* (Swan River Daisy); Mr. W. Smith, The Gardens, Sedgill House, Shaftesbury, Dorset, Violets (La France, Princess of Wales, Swanley White, Marie Louise, and Neapolitan); whilst Mr. Lever, The Gardens, Hillside, made a pretty exhibit with double and single Begonias resting upon tinted leaves of *Ampelopsis Veitchii*. Three new members were elected.

The Irish Gardeners' Association.

The annual winter session of this useful society is announced to open on Tuesday next. The programme for the session is a series of lectures, aided by limelight views by prominent lecturers, who have kindly volunteered their services; the chair will likewise be taken by prominent citizens. The inaugural lecture will be delivered by Mr. F. W. Burbidge, M.A., F.L.S., Curator of the Trinity College Botanic Gardens, on "The Progress of Garden Craft." Upwards of sixty slides will be displayed, and the chair will be occupied by Mr. Greenwood Pim, M.A.

Bristol and District Gardeners'.

This society held its usual fortnightly meeting at St. John's Parish Rooms on Thursday, October 24, Mr. Binfield occupying the chair. A most interesting paper was read by Mr. F. G. Treseder on "The Dahlia." Mr. Treseder being a specialist on this flower, a good number of the society's members availed themselves of the opportunity of getting some excellent information concerning this now very popular flower, and they were not disappointed, the lecturer, tracing its history from its first appearance into this country in 1787 up to the present day, during which time it has come to the front by leaps and bounds. It was first introduced into England by Lady Bute, since which time it has undergone numerous improvements, thanks to such men as Messrs. Treseder, Cannell, Keynes, and others. Mr. Treseder laid stress on giving the Dahlia plenty of room and air. The Cactus varieties were recommended as being the most useful for cutting, and would last a long time in water if cut twenty-four hours before using and placed in water so as to stiffen their stems. The best time to cut is in the evening or early morning. Cuttings are the most general means of propagation. To obtain large blooms, cutting away the slender growths was recommended, leaving six or eight shoots only per plant. A feature of the evening was the excellent collection of cut blooms of over fifty varieties of this favourite flower, and for which Mr. Treseder was unanimously awarded the society's special certificate of merit. His lecture was much appreciated, and he was accorded the hearty thanks of the association. Prizes for six blooms of Cactus Dahlias were awarded as follows:—1st, Mr. F. Taggart (gardener, Mr. Binfield); 2nd, Mr. A. Baker (gardener, Mr. Orchard); 3rd, Mr. Maidment. Certificates of merit went to Mr. Howell Davis, J.P. (gardener, Mr. Curtis), for two plants of *Acalypha hispida*; Mr. C. Bruce Coles (gardener, Mr. Lee), for *Cattleya labiata*; Mr. J. Harris, for collection of Dahlias; and to Mr. Skinner for a dish of Pears. The management of lawns and pleasure grounds will be the subject for the next fortnightly meeting, being the first prize essay won by Mr. Gardner, of Redland.

Birmingham Gardeners' Association.

At a recent meeting of this society (Mr. W. B. Latham in the chair), Mr. C. H. Herbert, manager of Messrs. Thomson and Co.'s Nursery, Sparkhill, read a very instructive and comprehensive paper "On the Propagation of Plants," giving concise instructions regarding the propagation and cultivation of a multitude of tender and hardy plants. Practical illustrations were also afforded in the way of grafting and budding. Speaking of the propagation of the Fig tree, he remarked that when employed in the Royal Horticultural Society's Gardens at Chiswick some years ago, he conceived the idea of "striking" the succulent young growths, but the suggestion was derided by the foreman as impracticable until it proved successful.

Among several old cultivated plants, and which nowadays are but seldom seen, such as the beautiful and deliciously fragrant winter flowering plant, *Luculia gratissima*, came in for special notice.

Mr. W. Gardiner, in submitting a hearty vote of thanks to Mr. Herbert for his able disquisition, took occasion to animadvert upon the comparative lack of interest too many young gardeners took in availing themselves of the advantages afforded by mutual improvement associations, and especially when combined with a library of books so invaluable as that of the Birmingham Association, with also the professional knowledge of Professor Hillhouse, of the Birmingham University, as president, and Mr. W. B. Latham, curator of the Botanical Gardens, Edgbaston, as chairman. These, he said, were advantages and benefits not readily available to gardeners situated at long and inconvenient distances from such a centre, and also half a century ago, or less, such acquisitions were hardly known in names.

It was, however, gratifying to observe that there still existed a gradual accession of the fraternity to the association to which he had the honour of being a member, and the great pleasure it afforded him in having been almost from its initiation a constant attendant at the fortnightly and the annual "outings" and convivial entertainments.

Mr. J. Wheeler, gardener to Mrs. H. Heaton, Harborne, exhibited, considering the situation, a small collection of very good

Pears; and Mr. Faudery, gardener to T. W. Webley, Esq., The Uplands, Solihull, fine specimens of Withington Seedling Apple. It is a very large, richly coloured, and prominently ribbed, codlin shaped fruit, with a somewhat deep eye. At the close of the meeting two or three young gardeners were elected as members.

Sheffield Chrysanthemum.

The members of the Sheffield Chrysanthemum Society had a most enjoyable treat on Saturday, having been invited by the Rev. Freeman, vicar of Wickersley, near Rotherham, to view his collection of early flowering varieties of Mums. The grounds are most tastefully laid out, the most striking feature being the blending of colours. One of the most pleasant sights was a fine



ASTER NOVI-ANGLIÆ PULCHELLUS (IMPROVED VAR.).

bed of Percy's Seedling running the whole width of the spacious lawn, the blooms being most uniform. Louis Lyonette was grown in great perfection, whilst Matchet White and Market White were most prolific, and grown in great profusion. Fine specimens of Bronze Dwarf, Queen of the Early, and Madam M. Massey were also observed. A fine lot of Bronze Prince, a dwarf variety, were also much in evidence. Mrs. Squire, Crimson Pride and Harvest Home, Old Gold, E. Grunnwald, white and red Queen of the Earlies, Lady Fitzwygram, E. Wright, Orange Child, and Lemon Queen were abundantly evident. Four large greenhouses were also full of plants in different stages of growth and bloom, and would on a later date show, no doubt, excellent results. The rev. gentleman not only grows nearly 1,000 plants of Mums, but also had a very fine collection of Tea Roses, whilst a good collection of Cactus Dahlias, including Uncle Tom, J. J. Crow, Mayor Tuppenny, and others, were also well grown, and altogether the members have to thank the vicar for a most enjoyable and instructive afternoon.—W. H.

Aster Novi-Angliæ var. pulchellus.

From amongst the very long list of varieties that compose the genus commonly named Michaelmas Daisies or Star-worts, no more impressively handsome or richly coloured representative could be selected than that one of the Novi-Angliæ section named pulchellus (improved) of which an illustration appears on page 407. The name signifies "beautiful," a title which the handsome purple flower-sheaths well deserve. Some authorities appear to treat the variety as a distinct species; many omit to mention it at all, but in Mr. Jones's very complete collection at Lewisham it is regarded as pertaining in all characters to *A. Novi-Angliæ*, under which species it is catalogued. The improved variety of pulchellus, which we illustrate, originated as a seedling in Mr. Lee's garden at Clevedon, about 1880; it nearly approximates in colour to the *A. roseus*. The disc is bright yellow. So confused is the nomenclature of the Aster genus that the true identification of this improved form may be a matter requiring care.



Hardy Fruit Garden.

AUTUMN PLANTING.—The season for planting fruit trees having arrived, advantage must be taken of every favourable opportunity when the ground works easily and cleanly by reason of being dry, to insert the trees and bushes in the ground. Although early planting is desirable, and the sooner it is carried out the better, it is not wise to do so when the soil is wet and pasty. The work of planting can be carried out more expeditiously, and with greater probability of the trees becoming quickly established, if the soil is of a crumbly character, so as to work among the fibres when these are spread out in the process of planting. Much advantage accrues from planting fruit trees in autumn rather than in spring. At this season the soil is comparatively warm and moist, and the roots will quickly take possession and emit a number of fresh roots before winter. This is a great help when spring arrives. The trees push strongly into growth, and vigorous shoots result, thus occasioning less trouble in the summer management.

PREPARING THE GROUND.—Unless the ground has been previously thoroughly trenched and made fertile to the depth of 2ft, this ought now to be carried out previous to planting any kind of trees or bushes. In trenching, however, keep the indifferent subsoil to the bottom, and the best material to the top. Whether manure should be added in the preparation of the ground depends largely on the sorts to be planted. Apples, Pears, Plums, Cherries, Peaches, Nectarines, and Apricots do not require to be planted in rich soil, as it will induce over-vigorous growth and prevent fruiting. On the other hand, Gooseberries, Currants, Raspberries, and Blackberries succeed best when planted in well enriched soil, deeply digging and working in a fair amount of rotten manure. Stone fruits generally like a calcareous soil—one containing lime—but if this cannot be secured naturally, much good will result from the addition of old pulverised mortar and wood ashes. Loam may with advantage be added to any poor soil rather than manure. All trees and bushes will root freely in it, making sturdy and abundant roots.

TAKING OUT THE HOLES.—The holes for planting in the trees should always be formed wide and shallow. Deep planting is not desirable, as the roots succeed best when near the surface. Plenty of width is essential, so that the fibres can be spread out to their full extent. Let the base of the hole be made somewhat rounded, and the soil broken well down and pulverised.

PREPARING THE TREES.—Newly obtained fruit trees always require a considerable amount of attention in regard to the roots. In lifting trees from the ground in the nursery, the roots are necessarily broken and injured to some extent. This necessitates pruning them back to smooth parts, which causes the wounds to heal more quickly and root fibres to start away. The roots of the trees ought not to be exposed to the drying influences of the air longer than necessary. It is best in all cases to lay in the trees as soon as received, not bringing them out from the soil until ready for planting. Long branches may have their tips removed, so as to make the trees well balanced, otherwise it is not desirable to prune severely at present. Crowded shoots or sprays emanating from old wood may be removed. Carefully pare smooth all cuts made. Wounds in the bark are often the first cause of gum or canker.

PLANTING.—A little fine and sifted soil, consisting largely of loam and wood ashes, ought to be in readiness for spreading

among the roots. Arrange the trees so that the soil mark on the stem will not be sunk lower than previously. The roots should be spread out in layers to their full extent. Cover each layer, as arranged, with the fine soil, sprinkling it over the fibres from the stem outwards. The upper layer of roots ought not to be covered more than 3in. Make the soil firm about the roots, and insert a stake at once about 4ft or 5ft long to standard trees, as it is important they should not be moved about in rough winds immediately after planting, as it will disturb the whole root system.

MULCHING STRAWBERRIES.—The oldest beds of Strawberries are materially benefited by liberally mulching the soil between the rows with some rich, half-decayed manure. Previous to laying it down, however, clear the ground of strong rooting weeds, discoloured foliage, and runners which may have started since the plants were denuded of them earlier in the autumn. Beds of young plants will not require mulching, the ground being rich enough to carry them on until they commence fruiting, after which assistance will be acceptable.

PLANTING STONE FRUIT TREES ON WALLS.—If Apricots, Peaches, Nectarines, Cherries, and Plums are planted on walls in the autumn, the trees stand a better chance of starting away freely in spring. In preparing the borders for their reception no manure should be mixed in, but the soil may be worked to a good depth, and some lime rubbish of a pulverised character, together with a quantity of wood ashes and burnt refuse incorporated. Soil it is really necessary to enrich should receive a dressing of calcareous loam, as being more suitable for the requirements of stone fruit trees. Fan-trained trees are the best for walls, this form of tree being easily regulated and kept well furnished with bearing wood. Bestow the usual care in planting, but only loosely secure the trees to the wall at present, as this will allow of the trees and soil to settle in position together.—LYMINGTON, HANTS.

Fruit Forcing.

PEACHES AND NECTARINES—EARLIEST FORCED TREES IN POTS.—For securing very early fruit the trees are unquestionably best grown in pots, the standard form being most suitable, and the stems varying in height, so that they will accord with the incline of the structure, and thus have their heads well up to the light. The very early varieties do well under this method of culture, as from the pinching they have blossom buds on the younger wood, and these are not liable to drop as are those on the first made wood of the previous year through over-development.

Such varieties as Alexander or Waterloo, Early Beatrice, Early Louise, Early Leopold, Hale's Early, Early Alfred, Dr. Hogg, Condor, Early Grosse Mignonne, and Stirling Castle Peaches, with Cardinal, Rivers' Early, Lord Napier, Goldoni, and Stanwick Elruge Nectarines, answer for early forcing, and give a good succession of fruit. A three-quarter span-roof house, facing south, provided with top and front ventilation, and four rows of 4in hot water pipes, two along the front, and two next the path on the front side of the house, cannot be bettered for very early forcing. The back wall will thus be left free, but it can be utilised to advantage by growing Tomatoes against it, and when the Peach and Nectarine trees are withdrawn, as they may be after the weather becomes settled in June, the front part of the house can be occupied with Tomato plants in pots, grown specially for the purpose.

SUCCESSION HOUSES.—The trees casting their foliage must not be hurried by removing the leaves forcibly, but admit air freely at night, keeping the house rather close in the early part of the day, and by maintaining a dry atmosphere seek gradual maturation, when the foliage will part freely from the trees. Remove the surface soil down to the roots, and supply fresh loam rather stiff, containing a judicious amount of some approved fertiliser. Give a thorough supply of water to inside border of houses with fixed roofs; but it is better to remove the roof-lights, and allow the border to become thoroughly soaked by the autumn rains. Any lifting and root-pruning of trees not in a satisfactory state should be attended to whilst the leaves are upon the trees, not, however, until the wood becomes ripened, not counting any immature laterals, and the foliage matured. Then act with dispatch. If fresh trees have to be introduced, this should be done when they are safe for removal, namely, when the leaves are nearly off the trees. The best description of trees for planting in houses are those three or more years trained to walls or to trellises under glass, and prepared by annual or biennial lifting. Such trees transplant safely with abundance of fibres. Carefully lifted and planted, they can be forced the first year with every confidence of a crop, if not started before the new year, and not brought on too rapidly. It is always desirable to select trained trees in bearing in preference to planting young ones that are not furnished with bearing wood, but if young trees must be planted, select such as have a well-formed base, not very strong in the wood, but well matured and free from gum.—ST. ALBANS.

TO CORRESPONDENTS

•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

FREESIAS AND LILIES (F.).—To have Freesias in bloom at or before Christmas it is always necessary, according to our experience, to have the bulbs potted by the end of August. You must give up the idea for one year now. Lilies may be potted now, or soon, and grown on for May flowering.

RETUBBING LARGE PLANTS (J. D. H.).—The task is one that naturally presents considerable difficulties; but we believe you may manage your ends by adopting the following method, practised many years ago by Mr. Van Hulle, of the Ghent Botanic Gardens. The plan is as follows: Take two strong posts, A and B, so securely stayed at their base that there can be no chance of their upsetting. Set them at a suitable distance from each other, and place between them the plant to be retubbed, or, what amounts to the same thing, take the uprights to the plant. The old tub or box is removed, the ball seen to, the stem carefully wrapped round to prevent injury to the bark, and the collar E put on. This can be tightened to any desired extent by the four screws shown in the engraving. Lastly, the two ends of the collar are slipped into the grooves in the uprights, which, as will be perceived, are also pierced with holes. The apparatus having been prepared for action, two men with a pole, or even one with a long lever, will raise the collar, and therefore the plant, say to the point C, and an iron pin is there pushed into the collar; the plant is then raised to D, and so on alternately. In a few minutes two, or at most four, men can thus raise plants of the largest size. To prevent any danger of overbalancing, a strong stake has been put to the plant, and of sufficient length to slide in the guide-ring F, as the plant is lifted. When the requisite height is reached, the new tub is placed under the plant, and the latter is let down, peg by peg, in the same way that it was raised. The less the distance between the holes the better, and avoid raising or lowering more than one hole at a time. The contrivance gives perfect satisfaction, and we recommend it for your consideration.

PROPAGATING CLEMATIS AND JASMINE—RAISING PORTUGAL LAURELS FROM SEED (Fido).—Propagation of Clematis varieties is mainly effected by grafting them on portions of Clematis roots early in the year. Good healthy pieces of root obtained from old plants outside, those of *C. Flammula* answering the purpose well. These should be split open, and the small scions inserted and tied with matting. After grafting they are potted in thimble pots, and placed in a propagating frame, with a moist warm temperature, where they will readily unite, and when this is effected they may be removed to cooler quarters, and be ultimately plunged outside. Clematises may also be readily increased, either by cuttings made of the young shoots, which may be cut up to every eye and placed in pots of sandy soil, in gentle heat, in the propagating frame; or by layers outside put in at any time. Layers, if kept duly watered, will emit roots at the joints covered, especially if the bark is scraped just below each joint before laying the branches in, and in the course of a year may be severed and planted, just before growth commences in the spring. Clematis species and varieties may be easily raised from seed, gathering the seed vessels in autumn, keeping in a cool dry place until spring, when the seed they contain may be sown in sandy soil, and stood in gentle heat till they germinate. If kept under glass for a time, and, after hardening off, planted outdoors in deep rich loam, the plants will soon flower. Jasmine may be propagated from cuttings of firm wood. The hardy sorts succeed under a hand-glass without heat. The tender species should be inserted in sandy or peaty soil, and placed under a hand-glass in heat. Portugal Laurel seeds should be sown in autumn in beds, or they may be kept until spring. The seeds, or rather stones, are, however, not usually sufficiently perfected in this country for free germination, hence the plants are usually raised from cuttings, these being taken off with a heel or portion of two-year-old wood, and inserted two-thirds their length in sandy soil in a semi-shady position, preferably in late summer or early autumn, never later than February.

PLANTS TO DESCRIBE (J. C. S.).—The genus *Polygala* embraces about 200 species, of which only *P. chamæbuxus*, *P. paucifolia*, and *P. Senega*, are worthy of culture. Planted amongst fibrous peat and sandy loam in rockeries they do well and are attractive. *P. Dalmasiana* we do not recommend. Some of the *Clethras* are hardy, others are not. You do not individualise the species. As a rule they are very pretty, and fairly easy to grow. Refer to any gardening dictionary.



RETUBBING LARGE PLANTS.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. A number of replies are necessarily held over till next week. (G. G.).—1. Newton Wonder; 2. Pennington Seedling; 3. Wealthy; 4. Triomphe de Louvain. (W. Cannaby).—1. Marie Louise; 2. Thompson's. (M. D. D.).—1. Scarlet Nonpareil; 2. Golden Noble. (Mrs. Munton).—Pear Marie Benoist. (R. Winstanley).—Pear Dr. Hogg.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. B.).—*Arundinaria japonica*. (R. F.).—1. *Polygonum filiforme*; 2. *Polygonum capitatum*; 3. *Polygonum lanigerum*; 4. *Polygonum compactum*. (M. N.).—*Salvia azurea grandiflora*. (J. Reid).—*Ceratostigma plumbaginoides*. We do not undertake to name varieties of *Chrysanthemums*. (J. Nelson).—*Leptosyne maritima*, an annual plant. The spiny leaves are those of *Crocus Diacantha*. (St. Andrew).—1. The fruits of *Physalis Alkekengi*; 2. *Monarda didyma*; 3. *Kniphofia* sp. (J. J. Lancashire).—1. *Ruellia Portellæ*; 2. *Begonia heracleifolia longipila*; 3. *Gymnogramma japonica variegata*, a section of the "Gold-Ferns." (D. R.).—1. *Cordyline* (not *Dracena*) *terminalis rosea-lineata*; 2. *Cordyline terminalis* var.; 3. *Phrynium variegatum*; 4. *Codiaeum Heathi elegans*; 5. *Phyllanthus nivosus*; 6. *Codiaeum gloriosum*.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Trade Catalogues Received.

James Coeker & Son, Rose Specialists and General Horticulturists, Aberdeen.—*Roses, Shrubs, Fruit Trees, Plants, &c.*
H. Henkel, Garden Architect and Landscape Gardener, Baumschule, Darmstadt.—*Nelumbiums and Nymphaeas.*
Rivoire & Sons, Seedsmen, &c., 16, Rue d'Algérie, Lyon, France.—*Catalogue of Novelties.*
Wm. Watson & Sons, Clontarf Nurseries, Dublin.—*Roses Fruit Trees Shrubs, Climbers, &c.*

Covent Garden Market.—October 30th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, case	24 0	to 30 0
„ dessert	3 0	6 0	Melons, each	0 9	1 0
Bananas	8 0	12 0	Pears, English, $\frac{1}{2}$ sieve	2 0	6 0
Figs, green, doz. ...	1 6	2 0	Pears, French, crate ...	4 0	9 0
Grapes, Alicante, lb. ...	0 6	1 0	Pines, St. Michael's,		
„ Colman	0 8	1 6	each	2 6	4 6
„ Hamburg	0 6	1 0	Plums, $\frac{1}{2}$ sieve	3 0	4 0
„ Muscat	0 9	2 0	Walnuts, $\frac{1}{2}$ sieve	2 0	3 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Horseradish, bunch ...	1 0	to 0 0
„ Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1	$\frac{1}{2}$ 0 2
Batavia, doz.	2 0	0 0	Lettuce, Cos, doz. ...	0 0	2 0
Beans, French, per lb.	0 8	0 9	Mushrooms, forced, lb.	0 6	0 8
Beet, red, doz.	0 6	0 0	Mustard & Cress, pnnt.	0 2	0 0
Brussels Sprouts, $\frac{1}{2}$ sieve	2 0	2 3	Parsley, doz. bnchs ...	2 0	3 0
Cabbages, tally	1 6	3 0	Potatoes, English, cwt.	3 0	4 0
Carrots, doz. bnch. ...	2 0	2 6	Radishes, doz.	0 6	0 9
Cauliflower, tally ...	4 0	6 0	Shallots, lb.	0 2	0 3
Corn Salad, strike ...	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	2 0	3 0	Tomatoes, English, lb.	0 3	0 4
Endive, doz.	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Ferns, small, 100... ..	10 0	to 16 0
Araucaria, doz.	12 0	30 0	Ficus elastica, doz. ...	9 0	12 0
Aspidistra, doz.	18 0	36 0	Foliage plants, var, each	1 0	5 0
Chrysanthemums, doz.	6 0	30 0	Lycopodiums, doz. ...	3 0	0 0
Crotons, doz.	18 0	30 0	Marguerite Daisy, doz.	6 0	10 0
Cyclamen, doz.	10	12 0	Myrtles, doz.	6 0	9 0
Dracæna, var., doz. ...	12 0	30 0	Palms, in var., doz. ...	15 0	30 0
Dracæna, viridis, doz.	9 0	18 0	„ specimens	21 0	63 0
Erica gracilis, doz. ...	10 0	12 0	Primulas	3 0	4 0
„ caffra, doz.	15 0	18 0	Shrubs, in pots	4 0	6 0
Ferns, var, doz.	4 0	18 0	Solanums	8 0	10 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	5 0	to 6 0	Lilium l. rubrum	1 6	to 2 0
Asparagus, Fern, bnch.	1 0	2 0	Lilium longiflorum ...	3 0	4 0
Bouvardia, white,			Lily of the Valley, 12		
doz. bunches... ..	4 0	6 0	bnchs	12 0	18 0
Bouvardia, coloured,			Maidenhair Fern, doz.		
doz. bunches... ..	4 0	6 0	bnchs.	3 0	4 0
Camellias, white... ..	3 0	4 0	Marguerites, white,		
Carnations, 12 blooms	1 0	1 3	doz. bnchs.	1 0	2 0
Cattleyas, doz.	8 0	12 0	„ yellow, doz. bnchs.	0 6	1 0
Chrysanthemums,			Odontoglossums	4 0	5 0
specimen blooms,			Primula, double white,		
doz.	1 0	4 0	doz. bunches... ..	5 0	6 0
„ white, doz. bnchs.	2 0	8 0	Roses, Niphetos, white,		
„ coloured, doz. bnchs	2 0	8 0	doz.	1 0	2 0
Cypripediums, doz. ...	3 0	4 0	„ pink, doz.	2 0	4 0
Eucharis, doz.	1 6	2 0	„ yellow, doz. (Perles)	1 6	2 0
Gardenias, doz.	2 0	2 6	„ red, doz.	0 6	1 0
Geranium, scarlet, doz.			Smilax, bnch	1 0	2 6
bnchs.	3 0	4 0	Stephanotis, doz. ...	3 0	0 0
Hyacinth, Roman,			Tuberose, gross	4 0	5 0
doz. bunches... ..	15 0	18 0	Violets, single, doz ...	1 6	2 0
Lilium lancifolium alb.	2 0	2 6	„ double, doz.	3 0	4 0

CANADIAN WHEAT: MANITOBA.—Writing to a London morning paper, a Press correspondent with the Royal party sends some details of the Wheat belt of Manitoba. On the morning of the 8th Poplar Point was reached. At this little prairie settlement, which is in the centre of the Manitoba Wheat belt, the Duchess was present at a very interesting exhibition of Wheat threshing. The huge machine, which, burning Wheat straw as fuel, works very economically, was drawn up by a traction engine to a gigantic pile of sheaved Wheat, and astonished us all by the rapidity with which it dealt with it, threshing and winnowing the great mass within a few minutes. It threw the separated straw and chaff far from it, spouting them out in a great fountain from the mouth of its long flume. After thoroughly cleansing the Wheat by the strong draught of its fans it dropped the grain ready for the market into the sacks beneath. The rain has to some extent damaged this year's Wheat crop in Canada, and a good deal of the grain may be of low grade; but still it is estimated that this year's harvest is the best by 27 per cent. that has ever been known in the country, and five times larger than it was last year, which was an exceptionally bad one. The following figures will convey some idea of the enormous quantities of grain that are produced on these rich plains: Sixty million bushels of Wheat are awaiting conveyance to the coast, and for the next two months four hundred loaded trucks (each containing from one thousand to one thousand two hundred bushels of Wheat) will be carried daily over the Canadian Pacific Railway. No manure is used on these rich Wheat-growing plains, and there remains still vaster tracts of as good soil that have never yet been tilled.



On Some Causes of Failure.

Robbie Burns wrote of many things that will keep his memory green as long as time lasts, but of all his striking verses the one that appeals most to us is the one which suggests the need for strict self-examination. What a revolution it would cause if for one single day we could each view our actions as they appear to our neighbours. It might be a salutary process, but it would, at the same time, be a very painful one. Of course, the neighbour does not take into account "mitigating circumstances," and he may not know all the ins and outs of our position. Yet in the country among farmers, it is difficult, nay impossible, to hide our daily actions from our neighbour's view. The operations of the farmer are conducted out of doors. No closed gates or walled enclosures. And as we are pretty well all of us following the same calling, we are more or less alert as to our neighbour's doings. An observant man learns valuable lessons constantly from the failures of others around him. This very week, Tuesday, October 15, we were with a large farmer going his rounds. The day was brilliantly fine and warm, and he was in good spirits. All his Wheat was drilled, and his men could turn their attention to other matters. His neighbours, in the same parish and other adjacent ones, farming the same class of land, were most of them ploughing, and an odd one or two just starting to drill. Anyone who knows anything of farming has learnt the value of a dry seed bed—in fact, even if it is wished, the drill will not work on wet, sodden land. Now, mark what follows. Since Tuesday we have had practically incessant rain, the weather has totally changed, and those belated sowers may have to wait some considerable time before the land is fit for the reception of seed. There is nothing like taking time by the forelock. Now, again, this harvest we saw a Wheat stubble that puzzled us considerably. It was covered with a green growth, not weeds, not seeds, something quite different, and we were curious enough to look nearer—Potatoes—the small seed left in the ground from the previous year. It was all the more astounding because in 1900 here Potatoes of any sort were dear, and eagerly sought for pigs, &c. That field must have been badly harrowed, or not harrowed at all. Besides the unsightly appearance, those plants must have taken from the land much of what ought by rights to have gone to the nurture of the Wheat crop.

We were struck the other day, when at a large agricultural sale, to see the lack of quality in the farm horses. There were thirteen or fourteen of them, and not one sound! No good young ones. Nothing suitable for town work. All worn out and practically done. The owner was not a poor man, nor uneducated. He was also living within a mile of a well-known shire stud, where the services of sires of undoubted pedigree could be had for a small fee. His farm was anything but a strong-land one (we mention this as the working of strong land is most detrimental to mares in foal), and he was also within twenty miles of the biggest horse fair in England. Surely there had been great apathy on his part. A good well-bred horse eats no more than an old worn-out one, and when it comes to selling—well!

There is a farmer who never has any "luck" at lambing time. He cannot tell why it is his ewes always go the wrong way and die. Other people can, though. The ewes are, first, very badly kept during the winter. Bad old grass, that really ought to be rabbit warren, very few roots (roots may be easily overdone), and little of anything else. The ewes come to the lambing pens weak and in wretched condition, and succumb. Those that struggle through leave their lambs a legacy of a debilitated constitution, and in trying days of early autumn, the weakly ones die off like mice. We know another case of sickly lambs and unhealthy ewes, but here the food supply is all that is right and good. We must look for another cause. We find two causes at work. The old-fashioned, prejudiced shepherd who does not believe in infection or in the use of disinfectants. The second cause is the lambing pen, which has been used for a great length of time till the ground and the surroundings generally are saturated and infested with harmful bacilli. If the master could see his way to a new shepherd and a clean, healthy lamb pen, we believe his difficulties would vanish like smoke.

Often there is an uncomfortable feeling between master and men. There is friction about little things. The wheels do not run easily. Continuously things are going wrong. It is not the master's fault, neither are the men altogether to blame. We once had a difficulty of this sort, and finally traced the cause home. Our best labourer was not on good terms with the

foreman, and, therefore, never lost an opportunity of setting the other men by the ears. The foreman, by the way, had risen from the position of labourer on the same farm, and the actuating cause was jealousy. It is all very well to keep old and trusty(?) servants, but they are apt to become dictatorial in their ways and manners, if not with the master, at least with the other workers.

There is near here a capital grass field, first-rate quality, that will easily fatten a big bullock in the summer. It is too deep and good to be much affected by drought, and yet this year, under new hands, it has failed to finish more than two bullocks out of the whole number. They certainly are very fresh, but not absolutely fat, and will require finishing off in the yards. The secret of non-success appears pretty plain to us. To save a few pounds poor stock was bought in the spring, and the grass, good as it is, cannot quite work miracles. This was a great error of judgment. We once kept a man for some time in our employ who was considered by the neighbours to be not very bright. Well, we admit he was not brilliant, but there was one job he could do to perfection, and that was earthing up and finishing off the Potato pies. This may not seem a great thing, and in mild winters it, perhaps, does not matter so much, but let the winter season come with great severity, there are many, many tons of Potatoes lost through bad and careless storing.

It is the custom on many large farms to allow the shepherd the use of a pony and cart. The distance may be great, and there is a certain quantity of hand food which has to be taken out to stock. A shepherd has many an opportunity of mending a gap or weak place in a fence which, if he is alive to his master's interest, he will do. A small "locker" in front of the cart, with a few nails, staples, and other equipments, and two or three stakes, is a fine addition to his shepherding paraphernalia, and adds but little to the weight.

How often do we hear complaints of a bad sample of corn! The corn was got well enough, but the damage came about after it was stacked. The stack was made so badly, so loosely put together, that the first good shower penetrated to the very middle, and caused discolouration of growth. In a busy harvest time thatching cannot be done at once, but a stack may be so built that, with the help of a few bats of straw, it ought to successfully resist all wet till it can be properly covered in.

We do not like to see masters from home on threshing days. There is a tendency among men to make a bad start, *i.e.*, a late one. There is too much loitering over the luncheon, and there is that lack of interest in the work which will prevent them spending a little overtime in straightening up. They forget threshing-day wages are high, and that the least they can do is to make a good and tidy job.

We have seen many a heap of big Potatoes left to freeze in a shed when a sheet or a bit of straw, the work of a few minutes, would make all right and safe. N.B.—In very severe weather a few sacks of Potatoes for immediate consumption may be safely kept from injury by being put in a corner of cow-house or stable.

We have this year observed many "patchy" pieces of seeds and uneven Turnips. We know the season has been a dry one, and we also know that in the spring small seeds and Turnip seeds were very dear—that is, good new seed. There was plenty of old in the market which was naturally lower in price. We were going to say cheaper, and we know many farmers who, for the sake of their pockets, chose the lower-priced varieties. If the weather had been moist and growing, there would not possibly have been much harm done, but the season was one that demanded a vigorous, quick-growing plant. We may be wrong in our surmises, but we think there is a great germ of truth in what we advance.

We have only hinted at a few points where we think there is room for improvement. Our readers will readily arrive at many other little particulars that we have not mentioned. It is so necessary to stop these little leaks. Much may be done by the co-operation of the men, and much also may be hindered. Forbearance can only go to a certain point, and it is no use winking at abuses because they are small. Liberty degenerates into licence, and loss is sure to follow. It is only by bringing to bear on daily life the strictest business habits that a man may hope to make both ends meet and have a little to wrap over.

Work on the Home Farm.

We have no rain but some very foggy nights, and the land is anything but dry on the surface. Below there is little moisture, and Wheats are not going into such a seed-bed as we should have liked for them. Small annual weeds will be numerous and troublesome in spring. Potatoes are all up and stored, and we are able to record some approximate results. Professor Maerker, which a month ago was far behind in the race, has made marvellous progress since, and finishes an easy first for yield, beating Up-to-Date by from three to four tons per acre on four different farms and under varying conditions. We personally assisted in weighing the produce of a 22yd length, measured from an ordinary 28in row, the portion selected being in the middle of a seventeen-acre field. The total weight of tubers was 12st 10lb

(178lb), and the crop at this rate would figure out to the enormous amount of 22½ tons per acre. The Professor is a round Potato of fair size, with a rather deep pink eye. It is very white in flesh and cooks well, but those we have tasted were lacking in flavour. Disease there is none, which probably accounts for the great increase in the crop since other varieties were ripe. It is an enormous breeder, many roots having from twenty to thirty good-sized Potatoes. There are few large, and no rough ones, but more than the usual proportion of seed. With two such Potatoes as this one and Up-to-Date there would seem to be no need for importation from abroad. The British Lion has turned out well, but can hardly be held likely to compete seriously with the above, whilst Findlay's Empress Queen and Fidler's Charles Fidler may be put in a similar class. "Good, but not good enough."

Sheep are doing well, the thick fogs having hitherto no bad effect. It is a curious thing but true, that although the Turnip is not generally considered an ideal food, yet the flock-master who has got his lambs well broken-in to eating it, thinks himself well out of the wood of Michaelmas difficulties. When lambs are on Clover, fog or frosty rime generally means trouble, on Turnips it makes no difference.

The steam plough is running through the ley which is to be planted with Potatoes. The term running through is used purposely, for the furrow is not turned but left on edge. The next process will be a dragging by steam across the ploughing, to be followed by ridging, the ridges lying open to frost influence until February is out.

Water Supply and River Pollution.

A conference of delegates representing a considerable number of sanitary authorities was opened under the auspices of the Sanitary Institute at St. Andrew's Hall, Newman Street, Oxford Street, London, on Wednesday, October 16, for the purpose of considering the question of water supplies and river pollution.

The conference considered various papers contributed and read by delegates. The first of these was by Mr. J. Parry, and dealt with "The Protection of Watersheds." It pointed out that there had been no general legislation for the protection of the gathering grounds of waterworks, as distinguished from other watersheds, since 1847. Generally speaking, efforts to prevent the fouling of water flowing into reservoirs for domestic use had been confined to the purchase of the drainage areas affected. That was an effective and speedy method of attaining the desired result. Public opinion in America recognised the importance of protecting the gathering grounds, and vigorous measures had been adopted in certain States. In his own view the time had arrived when some advance should be made on the legislation of 1847, and when the Rivers Pollution Act of 1876 should be so amended as to become effective for waterworks purposes. If water supplies were to be properly protected, the sources, including the area over which rain was collected, must be owned by the authority responsible for the waterworks. As to the question of how the drainage areas acquired for the purpose of waterworks could be utilised, he would suggest they could be given up to sheep-farming, planting, and deer parks.

Other papers were read by Dr. E. C. Seaton, dealing with the protection of underground sources of public water supply; by Mr. Clayton Beadle, on the right of underground pumping in relation to the flow of neighbouring streams, as instanced by the River Cray; by Dr. Mill, on the rainfall and population of England and Wales in relation to water supplies; by Dr. Greenwood, on the desirability for reports on the water supply of each county; by Dr. Williams, on the rivers of Glamorganshire; by Dr. Thresh, on water supply to isolated cottages; and by Miss C. Cochrane, on village water supplies. A lengthy discussion took place on these papers, in the course of which the opinion was generally expressed that though water companies had done good work, the time had come for public bodies to attend both to water supplies and the areas in which they were collected. Mr. F. Varney, of the London County Council, urged that the period was at hand when the metropolis should go farther afield for its supply, and not draw it altogether from "a tainted area" in which high farming was carried on. Mr. Lyons Walcott, of the Middlesex County Council, argued that the poorer agricultural districts in the neighbourhood of great towns should be protected against their powerful neighbours. Dr. Hodgson, of the Cheshire County Council, declared that before new legislation was demanded the councils should carry into effect the powers they now possessed.

A hearty vote of thanks was accorded to the authors of all the papers. The conference passed a resolution declaring that the purity of the water supply throughout the country could only be adequately secured by placing such supplies in the hands of representative bodies directly responsible to the consumers.—"Morning Post."

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Journal of Horticulture

THURSDAY, NOVEMBER 7, 1901.

Chrysanthemums:

Salient Features in Prize Schedules.

READERS of the *Journal of Horticulture* are particularly interested in all matters connected with Chrysanthemums, and as the exhibitors of these flowers are more numerous than ever, I thought a note on the salient features of the various prize schedules of leading societies might not prove uninteresting reading at this season of the year. Whether the intensity of excitement of a few years since, when one society was vying with another in offering inducements to exhibitors, will be maintained in the future, I cannot say; but certainly exhibitors are not less energetic, or societies less encouraging, to produce what all aim at—the finest display. While we hear annually of some society being compelled to abandon its show for the present, on the other hand we usually have the encouraging announcement that a new society has been started; so, taking all things into consideration, we cannot but assume that an equal deep interest is being taken in Chrysanthemum culture.

In my diary I have noted 103 competitive exhibitions, commencing with Portsmouth and Croydon on October 29th, and ending with Bristol on November 23rd. When we consider that this number of exhibitions have to be crowded into the short space of twenty-six days, Sundays included, no one can say but that the Chrysanthemum season is a busy one. No less than twenty shows take place on Wednesday, November 13th, therefore to report them all in one issue means a vast amount of labour [and space].—ED.]

The shows that are held at Portsmouth and Croydon are indicative of the general quality of the blooms to be expected

READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other Address.

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Hyacinths, Single, first size, named, in several leading sorts, red, white, and blue varieties, equal quantities, my selection ..	20 0	—	Anemone, Single, mixed ..	1 4	12 6
Tulips, Single early, in the finest mixture ..	1 10	16 8	Anemone, The Bride, pure white ..	1 8	15 0
Tulips, Double early, very fine mixed ..	2 2	20 0	Anemone apennine (blue Wood Anemone) ..	3 0	25 0
Tulips, Single Duc van Thol, mixed, for forcing ..	2 6	20 0	Anemone apennine (white Wood Anemone) ..	5 0	—
Tulips, Duc van Thol, scarlet-red ..	2 6	20 0	Anemone nemorosa (double White Wood Anemone) ..	6 0	—
Tulips, La Candeur, double white ..	3 4	30 0	Anemone japonica alba, pure white ..	4 0	—
Tulips, Single La Reine, rose-white ..	2 0	18 4	Dielytra spectabilis, red (Bleeding Heart) ..	12 6	—
Sparaxis, very fine, mixed ..	0 8	6 0	Funkias, in the finest mixture ..	10 0	—
Triteleia uniflora, pure white, very fragrant ..	1 6	—	Narcis.-Polyanthus, in the finest mixture ..	4 0	38 0
Ixias, in the finest mixture ..	0 6	5 0	Narcis., Double, mixed ..	3 6	30 0
Crocus, first size, in the finest mixture ..	0 10	8 0	Narcis., Single, mixed ..	1 4	12 6
Crocus, second size, in the finest mixture ..	0 5	4 0	Narcis., Trumpet, mixed ..	2 6	20 0
Crocus, yellow, third size ..	0 6	4 2	Narcis., Campanelle, pure yellow ..	1 2	10 0
Spanish Iris, in the finest mixture ..	0 7	5 0	Ranunculus, French, mixed ..	1 0	9 0
Iris Kämpferi (Japan Iris), mixed ..	5 0	40 0	Ranunculus, Persian, mixed ..	1 0	9 0
Iris sibirica, very fine, mixed ..	4 0	40 0	Snowdrops, Elwesi, Giant Snowdrop ..	1 6	13 0
Montbretia crocosmaeflora, orange-scarlet ..	1 6	—	Gladiolus, Marie Lemoine, cream ..	2 6	—
Montbretia, very fine, mixed ..	5 0	—	Gladiolus Brechleyensis, scarlet-red ..	2 6	20 0
			Gladiolus Colvillei alba, pure white ..	2	10 10
			Azalea ponticum, each, 10d. to 1/8.		

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during the season. At Portsmouth adherence is still continued to the combination class of incurved and Japanese as the leading item in the schedule of twenty-four classes devoted to the flower. A first prize of £7, with a second of £5, is the chief inducement for exhibitors, and as a rule such a class as twenty-four incurved blooms in not less than eighteen varieties and twenty-four Japanese distinct, does not fail to bring a spirited competition. For a group of Chrysanthemums and foliage plants of 60 square feet £4 is the first prize offered. Amateurs are well provided for at this show. Nine classes are set apart for them, and as a rule they make a creditable display.

At Croydon a Challenge Cup, value 25gns, and £5 is offered for thirty-six blooms, distinct, of Japanese and incurved varieties, and is quite an easy class to fill, being, therefore, one that should be productive of keen competition. The Kent County Society hold their show, as usual, in the Rink, at Blackheath. No less than thirty classes are provided, which are thoroughly representative of the flower. Here, also, a combination class of both Japanese and Incurved, in thirty-six varieties, is the leading feature.

Both Derby and Halifax Shows are held on November 1 and 2. At Derby the leading classes are for twenty-four Incurved, in not less than eighteen varieties. Similar conditions prevail for Japanese varieties also. Both are easy, and should produce brisk competition. Many classes are provided for decorative Chrysanthemums set up in epergnes, vases, and baskets filled for effect. At Halifax twenty-four classes are provided for Chrysanthemums alone, which is sufficient to make a bold display. Here, also, the sections are divided. A Silver Cup value £5 5s. is offered for twelve Japanese varieties, distinct. Classes are also provided for twenty-four Japanese, and the same number of Incurved, in not less than eighteen varieties.

Tuesday, November 5th, is a busy day. The shows of the National Chrysanthemum Society, Southampton, Plymouth, and Cardiff are all being held. The former, as usual, is centred in the Royal Aquarium, London, but considering the excellent report the Journal contains of this exhibition no comment need be made by me.

The Southampton Show is held as usual in the Skating Rink, quite one of the best sites in the provinces, affording ample space and light. The Queen Victoria Memorial Challenge Trophy, value £40, is the leading prize here, and a handsome one it is, while the conditions of competition are quite easy. Twelve Japanese distinct, three blooms of each on stems, with foliage. At Plymouth a grand exhibition is usually held. All the best of West County exhibitors meet. £10 is offered for forty-eight Japanese, in not less than twenty-four varieties—quite an easy class to fill. Many local classes are provided, which produce spirited competition. At Cardiff £6 is offered for twenty-four Japanese distinct, a class that should produce keen competition. No less than thirty-five other classes are provided.

The Ascot, Sunninghill, Sunningdale, and District Society hold their annual show in the Grand Stand, November 6th, where there is usually a good display. Separate classes are provided for Japanese and incurved blooms in twenty-four varieties. In these and in the open class for Chrysanthemums mixed with foliage plants encouraging prizes are offered. In addition, no less than seventeen local classes are provided.

In the Guildhall the Winchester Chrysanthemum Society hold their annual meeting on the 7th, and which is usually one of the best of provincial shows. The general quality of the exhibits is a remarkable feature here. The combination class of forty-eight incurved and Japanese distinct blooms is one of the leading features here, and so are the Chrysanthemum plants in separate colours as grown for conservatory decoration. Nowhere can better groups of Chrysanthemums only be seen. In all, twenty-eight classes are provided. Windsor and Leicester commence their shows on the 8th. The former is usually favoured with good quality exhibits, the site being really too small for the number. The Leicester Society issue a thoroughly representative list of prizes, without any startling items in the way of big rewards.

The week opening with Tuesday, November 12th is indeed a busy one. In Bingley Hall the Birmingham Society opens its show as usual, and is perhaps the most representative meeting of any, as it embraces so thoroughly all sections of horticulture. Nowhere can so many trade exhibits be seen, and which add so much to the interest and beauty

of the show. Fourteen classes are provided for cut blooms. The principal classes are those for incurved and Japanese in twenty-four varieties, for which, in both classes, no less than six prizes are offered, ranging from £8 downwards. Specimen plants are largely encouraged and thoroughly well represented, nine classes being provided. A first prize of £10 is offered for a group to which Ferns and foliage plants may be added. Fourteen classes are arranged for fruit, many for vegetables, and, what has been for many years a feature here, the magnificent Primulas, of which the cultivators in and around this city may well be proud.

In the Public Hall the Ipswich Show opens on the same date, and is steadily asserting itself as one of the foremost societies in the Eastern counties. For the general good quality of its groups of Chrysanthemums, specimens and cut blooms, Brighton has long held a prominent position. No less than four semicircular groups are provided. £5, a Silver Challenge Bowl, and the Society's Silver Medal are offered as the premier award in the leading class. Pyramid, standard and dwarf-trained Chrysanthemum plants are here encouraged, substantial prizes being offered. In the cut-bloom department the principal class is that for thirty-six Japanese not less than twenty-four varieties.

Hull, York, Bournemouth, Bristol, and Reading Shows are held on the 13th. For years the Hull Society has done much to encourage the cultivation of the Chrysanthemum, and to display it afterwards in a useful manner. This society can safely be said to have been the pioneer of the combination grouping system of Chrysanthemums and foliage plants, for which handsome prizes have been, and are still, offered for such a group arranged in a space of 100 square feet. An interesting class is that for a drawing-room mirror-panel group, which so well illustrates how plants may be utilised for effect.

Numerous are the classes, too, for specimen-trained plants and for "cut-backs," which show what an adaptable plant the Chrysanthemum is for decoration. Twenty-three classes are provided for cut blooms, the principal one being those for twenty-four incurved and Japanese separate, the former to be not less than eighteen varieties and the latter distinct. A first prize of £6 is offered in both classes. Single-flowered varieties are much encouraged, and so are the "Rundle" type, which are interesting, but seldom seen nowadays.

Table decoration under artificial light is here a feature. A piece of Challenge Plate, value £10 10s., with a sum of 4gns, is offered as first prize for a completely laid round dessert table for six persons, and as the competition is keen usually, and a properly darkened room provided, this class adds much to the interest of the show. No society that I know of does so much to encourage the amateur exhibitor. No less than fourteen classes are provided for their exclusive benefit.

At Bournemouth £7 is offered for thirty-six Japanese blooms in eighteen varieties, quite an easy class to fill. For a group of Chrysanthemum plants interspersed with foliage plants substantial prizes are offered. Much encouragement is given to local competitors in both plants and cut blooms. Even single-handed gardeners are not forgotten. For years the autumn shows held by the Reading Chrysanthemum Society have been a success and some of the best seen, so good are the prizes and enthusiastic the cultivators. A Challenge Cup, valued at 18gns, is given, with a cash prize in the group class.

The Scottish Horticultural Association hold their annual show in the Waverley Market, November 14th, and no doubt it will be, as it invariably is, a success. Nowhere is so much encouragement given to the staging of cut blooms in vases as here, no less than fifteen classes being set apart for that method only. For twenty vases in twenty varieties, three blooms of each, £20 and a gold medal is offered for the premier award; £15, £10, and £5 is also offered for the remaining prizes. For fifteen varieties, three blooms of each, also in vases, the City of Edinburgh prize, valued at £20, is offered, with a second prize, £10. Then, again, the Scottish Cup, open only to Scottish gardeners, is offered with £10, as first award for twelve vases in twelve varieties. These are but a few of the many good classes the schedule contains. On the same day the Devon and Exeter Horticultural Society hold their one hundred and ninety-fourth show in the Victoria Hall, Exeter. Plants in pots and cut blooms are well represented. A Silver Cup and £5 is offered in the latter section.—E. MOLYNEUX.



Useful Odontoglossums.

Besides the handsome *Odontoglossum grande*, *O. crispum* and its many varieties, there are two other outstanding *Odontoglossums* of great excellence for general purposes, and commendable in the eyes of many cultivators because they are not too exacting in their requirements. These are *O. cirrhosum* and *O. maculatum*, both of which are figured on this page. Mr. Richards has repeatedly furnished the necessary cultural comments, and even so late as September 5 and 26, pp. 215 and 283, gave an extended treatment of the whole genus. The flowers of *O. maculatum* are not particularly attractive, but they come during the dull days of winter, and are, therefore, the more welcome. In colour they are yellowish-brown, with a pleasing tinge of purple or crimson on the lip. *O. cirrhosum* is now an old favourite, and is used a good deal in floral decorations. The graceful flowers have rich chocolate spots on the white sepals, petals, and lip.

Lælia autumnalis atro-rubens.

This was flowering freely in a well known collection, and is one of the richest colour varieties of this popular species. The sepals and petals are deep rosy crimson at the points, becoming paler below, and the lip has an intense purple crimson blotch in front, with white side lobes—a rich and effective combination of colour. It is a good grower, thriving well in company with the other Mexican *Lælias*.

The Week's Cultural Notes.

That beautiful *Dendrobium D. Phalænopsis Schröderianum* is now in full beauty, and those having fine specimens are very apt to expose them while in flower to treatment very unsuited to them. The conservatory in many places is very ill adapted to the requirements of heat and moisture-loving subjects such as this *Dendrobium*, and although the plants have a fine effect there, they are often badly checked in growth owing to it. In a fairly well-arranged house a week or ten days' sojourn may do the plants no harm, but to take them there on opening, and leave them until the flowers fade, has been the ruin of many fine specimens.

D. Phalænopsis is rather erratic in its habit of growth and rest, and the treatment must vary a little with individual plants. When it is plain that the plants are not going to make any more growth, they should be kept well up to the light, and slightly dried at the roots. Such plants will start away in spring with vigour, and flower early. Others that seem inclined to grow must not be checked by drying off, but kept warm and moist to finish them up as early as possible. In either case they must have heat, none of the Australian species being able to withstand cold in winter like the Moulmein and Indian sorts.

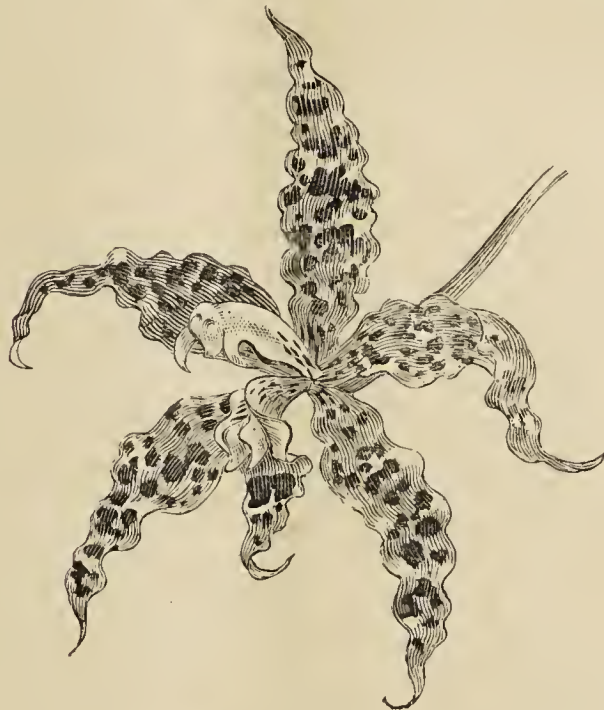
Lælia purpurata is another Orchid that cannot be depended upon to keep dormant in late autumn. When it does the shoots always come away with greater vigour in spring, and flower more freely than when they are moving sluggishly all the winter. But it is quite impossible to keep some specimens at rest, and



ODONTOGLOSSUM MACULATUM.

there is no doubt that some varieties of this favourite species are specially prone to this fault. So are the *Cattleyas aurea* and *gigas* and the fine hybrid between them, *C. Hardyana*. But when they can be kept dormant they are one and all better for it.

Disa grandiflora is now, or should be, growing freely, and will require a very full supply of water. Air in plenty is also necessary, and there are many worse places for a batch of this species than a position close to a door or a ventilator in an ordinary greenhouse at this time of year. Light dewings overhead, with water from the syringe, will keep the atmosphere sufficiently moist, and, what is equally important, will make un-



ODONTOGLOSSUM CIRRHOSUM.

comfortable quarters for thrip and other insect pests that affect this fine *Disa*. The hybrid kind, *D. Veitchi*, is more easily grown than the type and almost equally beautiful.—H. R. R.

Hardy Flower Notes.

However much the flowers may strive against the approach of their time of rest and of decay, it comes with steady hand. Chill frost may have been withheld or chastened, yet yellowing leaves and leafless or thinning trees and shrubs tell us that the dull days of the garden year are close at hand. As the eye rests on the hillsides, we see great fields of Bracken now russet-brown. If that hardy plant is thus fast losing its green, much more may our flowers—many of them from warmer lands—grow weary of the shortening days and the autumn's storms, and grow tired-like, and show signs of their desire for rest. All this insensibly saddens us, even amid the many charms shown us by these plants in their various stages of decrepitude. As we look with saddened admiration upon the silver hair of the aged, so we may look upon the colouring leaves of our flowers and trees. They are tokens of decay; yet they are of beauty unspeakable.

The Briony hangs in the thinning hedge, as russet as harvest corn, The straggling Blackberries glisten jet, the haws are red on the Thorn;

The Clematis smells no more, but lifts its gossamer weight on high— If you only gazed on the year, you would think how beautiful 'tis to die. "A Farmhouse Dirge."—AUSTIN.

Though these things are among the treasures of the time, it is not to be supposed that ruddy, ruby, brown, or golden leaves are the sole pleasures of the garden now. It is to the remaining flowers that we turn for greater brightness to our thoughts; for the gayer colours for which we are ever on the search. Let us see what these things are! We must ever welcome the last blossoms of these flowers of the sun, to which have been fitly given the name of *Helianthus*. Somehow, seeing them, it seems hard to enter into the feelings of William Blake, who spoke of the flower as

Sunflower, weary of time,
Who countest the steps of the sun,
Seeking after that sweet golden clime
Where the traveller's journey is done.

Nay, it has too much of joyousness about its flowers of gold; too full a message of good cheer.

There are still several of the *Helianthus*es in flower to give us this cheering thought, and we may stay for a moment or two to talk of them as they seem to those of us who love our gardens and our flowers, and think of them alike from the practical and the poetic standpoints. First among them we must, I suppose, place the two newer species which stand most in need of admission to our gardens. These are likely to make their way into many gardens, and it must be said that they seem worthy of this, and that they will be a gain indeed to those who have not grown them before. Perhaps the leading place may be given to *Helianthus mollis*, as it is now known, though it comes near to the other I desire to speak of—*H. tomentosus*—in several ways. It has been frequently exhibited by one or two nurserymen this year, and its merits in a cut state make it very suitable for cutting for the house, as well as for exhibition; while its bold habit and handsome flowers will make it appreciated in the garden. Personally I am not disposed to think more highly of it than *H. tomentosus*, which is a really fine garden flower, but I think *H. mollis* is more likely to be the greater general favourite. The flowers of *H. mollis* are deeper in colour than those of *H. tomentosus*. They are of a bright orange, and their whole appearance and their flatter formation distinguish them from the latter. The habit is much the same, and the leaves, which are on branching stems, are long and rather lanceolate. The plant is scabrous or pubescent. From its native habitats in North America, we would suppose that it would like a dry and poor soil. It has certainly been very good this season, and few of us have had any cause to complain of a superabundance of moisture in our gardens; rather the reverse. It grows naturally on dry, barren soil. It should grow from 2ft to 5ft high.

For boldness of appearance in the garden, it must, one thinks, give place to *H. tomentosus*, which in its native land—the United States—grows from 4ft to 10ft high. Few of us would care to grow it to the latter height, but a plant 5ft or 6ft high, such as the one here, is a fine object with its branching stems, rather hoary-green leaves, and rich golden flowers, deepening towards orange. It, too, seems to like a dry soil, and one has been surprised with the vigour shown by this plant, only put in position in spring and not favoured with the best weather conditions for a newly planted flower. It, too, should have a future before it. One must also briefly say a word for the other *Helianthus* which are obtainable now. Earlier in the autumn we may think we have a surfeit of these yellow composites, but when October is running on we are glad of all, even of the small-flowered *H. giganteus*, as well as of *multiflorus* and its double forms.

If the Sunflower is typical to us of the golden days of early autumn, then the perennial *Asters* may well represent to us those of the later times. Natives, most of those at least in our gardens, of woods or thickets, and thus shade-lovers at home, they are emblematic of the waning sun and the darkening hours. Yet, how they seem in unison with the times, and how they brighten up the garden with their blooms, some soft-coloured and pallid; some of almost brilliant colouring; and almost all of beauty sufficiently marked to please us. Then, how varied they are in their way! We rejoice over the big flowers and upright habit of the varieties of *A. amellus*; we admire those of the *Novæ-Angliæ* and the *Novi-Belgii* types and varieties; yet none the less do we appreciate the grace of the flowers and plants of the habit of such *Starworts* as *A. cordifolius* and *A. diffusus*. Those of us who were familiar with the few poor *Starworts* which were grown in the greater number of gardens of our earlier years must confess that our later gardening lot is cast in pleasant times, when we can have such flowers as the many lovely *Michaelmas Daisies* now at our command. They have been tossed about by the storms; they have been drenched by heavy rains; they have been beaten by hail-showers—yet they are charming still. Then our hearts are alternately cheered and saddened by the autumn *Crocus*. At times we would hang over them, delighting in their marvellously delicate loveliness, so full of grace and sweetness; and another day we look upon them with compassion as we see them beaten down by the season's rains or thrown down by the winds of the time. But the bitterness of the gall is in the end driven away by the sweetness of the nectar of pleasure, and we cannot part with these fragile flowers from our garden treasures. Such *Crocuses* as *speciosus*, *asturicus*, *pulchellus*, and *iridiflorus major* are annual sources of springs overflowing with lasting enjoyment. Then we may see other flowers about, even if we exclude from view the half-hardy and annual plants which

often come in so well at this time. Have we not *Meadow Saffrons*, with their cups or rosettes, such as the double forms will give? Have we not *Roses* still which, in the borders, on the walls, or on trellises and pillars, give blooms of grace indeed? Yes; and there are *Campanulas*, *Phygelius capensis* with scarlet flowers, gay *Kniphofias*, some *Heaths*, tiny *Cyclamens*, golden *Oenotheras*, bright *Poppies*, not so gay as in their true season of June; *Clematises*, in bloom or showing their "gossamer weight"; *Hydrangeas*, hardy *Fuchsias*, golden *Rudbeckias*, black-hearted it may be, but of welcome beauty; *Chrysanthemums*, and many a stray bloom, some of which remind us of the coming days of spring; for among them has come a golden flower on *Trollius Gibsoni*. Truly, if we are about to enter the garden *Malèbolgê*, we pass to it along the *Primrose path*.—S. ARNOTT.

Gardeners and Estate Agents.

Among the many difficulties which head gardeners of to-day have to fight against to an increasing extent, is the unwarranted interference of estate agents, and I often wonder why the matter is not more often ventilated in the horticultural press. Perhaps the principal reason is that there are few gardeners who feel independent enough to tackle so delicate a matter, which often proves dangerous ground, as the influence of an agent is frequently an unmeasurable quantity, and is too often exerted "below" rather than "above" board. Writers in periodicals devoted to the interests of the land agents are, however, by no means backward in treating of such matters, and in arranging facts in a light extremely favourable to their "clients," and for this reason I am prompted to appear for "the other side." At the outset, however, let me explain that there are two classes of men to which my remarks are not intended to apply, because they have too great a knowledge of their business, or too little "arrogance," to create such incidents as I shall subsequently touch upon.

In a few princely establishments it is the custom for the employer to have nothing whatever to do with financial details; the head of each department is responsible for the working of it, and a secretary or agent is the medium through which financial matters are arranged, and, to their credit, be it said that it is seldom that such gentlemen attempt to interfere with, or hamper the gardener in the conduct of his duties. In some other instances a gardener has perhaps proved a faithful and capable servant for a number of years, and when changes come he is promoted to the vacant agency, sometimes still retaining the control of the gardeners, at others appointing a successor to succeed him. Such men are naturally deeply interested in the gardens which have been extended and improved under their watchful care, and although the control of them may have passed from their hands, they are always interested in watching new developments, and like to be on the best of terms with their successors, and the latter will generally find that such men have a real desire to be their true friends, and may help them in many ways, and I have never yet known a case in which two fair-minded men could not, under such circumstances, work amicably together for the benefit of their employer.

The above illustrations I therefore place outside the scope of this discussion. In giving a few examples of the methods of an increasing proportion of estate agents, let me start from the beginning of a gardener's term of office. A thoroughly trained man who has spent from twelve to fifteen years in various departments of a good garden, is brought to the notice of a nobleman or gentleman requiring the services of a gardener capable of taking the entire management of a large establishment. An interview is arranged, and the candidate meets the would-be employer, as well as the mistress of the house, who usually takes great interest in the gardens. Matters progress satisfactorily, and the gardener is engaged on the distinct understanding that he is responsible to his employers only in regard to the conduct of the garden. It is arranged that the expenses of the gardens shall be kept within a stated amount, and they expect him to produce the best results he possibly can with that amount of expenditure. He is to obtain the money for weekly wages from the estate office, and at the end of each quarter, when

the accounts come in, he is to send in a list to the same office, and receive in due time a cheque for the total amount. When the bills have been receipted they are returned to the office, so that the agent safeguards the financial part of the business for the employer.

In some instances a lump sum is placed to the credit of the gardener, who writes out all cheques. But in either case every penny expended has to be accounted for. After such clear and easily worked arrangements have been made, one would think it an extremely difficult matter for misunderstandings to arise between agent and gardener; but the former, as a rule, is a very ingenious individual, and in scores of instances in which as clear a contract as that above indicated has been made, agents have, by a slow, "Russian-like" process peculiar to themselves, become firmly convinced that they have a controlling voice in the management of the garden. They begin to put their ideas into practice in a very mild and plausible way at first, but woe to the gardener who allows them to insert the "thin edge of the wedge;" when once this is accomplished, it is either a matter of becoming the "puppet" of the agent, or seeking "fresh fields and pastures new." The only satisfactory way of meeting their first encroachment is for the gardeners to point out respectfully, yet firmly, that as they accept full responsibility for everything connected with their charge, they can allow no interference except from their employers, whose wishes it is always their pleasure to carry out.

Owing to agricultural depression, there has sprung up during the last twenty years an inferior type of estate agents, men who have very little, if any, practical knowledge of the various operations connected with estate management, having passed the greater part of their time doing the clerical work in the office, and in due time being promoted to the position of agent, because they proved the cheapest (?) men to be had. Such men perform the part they have been accustomed to efficiently, but when it comes to the real management of an estate, they are most expensive managers, and matters get into an entangled condition. Thousands of pounds are annually wasted in this country by such men in carrying out the work of planting fruit trees, shrubberies, and in the management of woods, and yet these are just the types of men who are ever ready to find opportunities of interfering with the business of head gardeners whose success as cultivators cannot be gainsaid.

I could give instances of such cases which have come under my notice in recent years, but perhaps enough has been written for the present. I ought, perhaps, to point out that I have no personal grievance whatever of the above description, but I sometimes meet with gardeners of the best type who are striving with might and main to maintain their charge in the best possible condition, who give every satisfaction to their employers, but whose feet, nevertheless, wander over a "thorny" path, formed by the "pin-pricks" of agents who have a wonderful capacity for managing everybody's business but their own.—ONWARD.

Crystallised Fruits.

The manufacture of these sweetmeats is really quite a simple matter, coming easily within the capabilities of the ordinarily clever housewife, while the expense of preparing them is very small. Of the various fruits best adapted to this purpose, Peaches, Pears, and Plums, Pine-apples, Cherries, and Currants are the most generally used, and are prepared as follows:—Stone the Peaches, Plums, &c., by making a small incision in the side, through which the seed is slipped, pare and quarter the Pears, and cut the Pine-apple into slices, half an inch in thickness, across the fruit. Weigh and allow an equal quantity of the best white sugar, make a rich syrup, adding one small cup of water to each pound of sugar. Boil for a few minutes together, then add the fruit and cook gently until clear, but unbroken. Remove carefully on to a wire strainer and let it stand about an hour, or until perfectly cold, then sprinkle liberally with powdered sugar, and stand the strainer on a dish in a moderately warm oven for two hours. At the expiration of that time, writes a correspondent in "Good Housekeeping," turn the fruit, sprinkling as before with the sugar, repeating the process until the juice has quite ceased to drip, and the outside is dry and crystallised. It is then removed from the oven and allowed to get perfectly cold, before being packed away in small boxes between layers of waxed papers. Thus packed and stored away in a dry place, it will retain its perfect condition for an indefinite length of time, form-

ing a charming adjunct to the housekeeper's store of "extras." It is perhaps necessary to add a word of caution in regard to overheating the oven, the exact amount required being ascertained by experimenting, since too great a degree of heat will most effectually change a delicious sweetmeat into the toughest of leather.

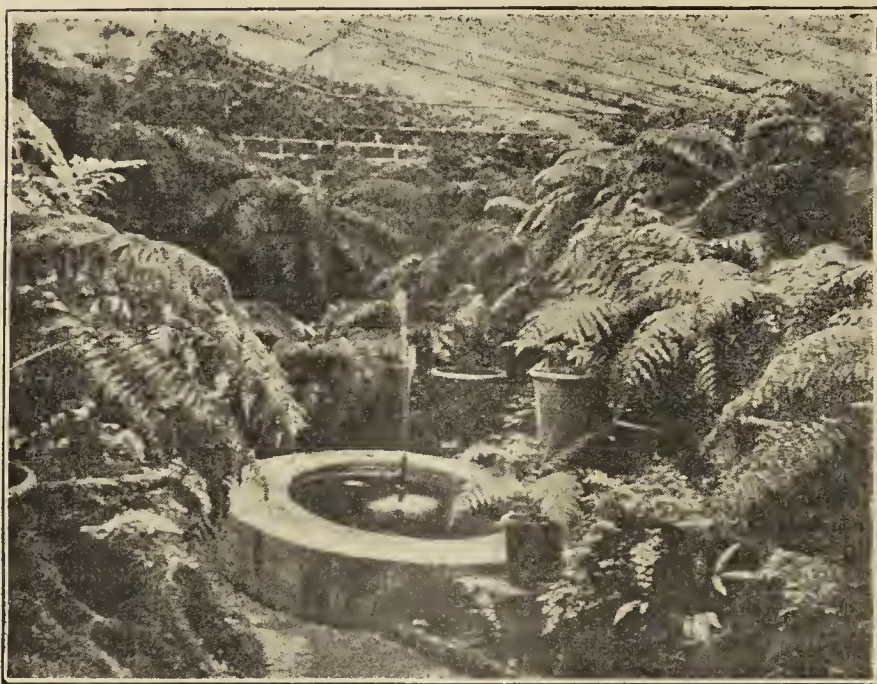
History of the Apple.

(Continued from page 371).

Continuing our remarks from page 370, October 24th, we will suppose that the Golden Pippin of our days is a successive grafting, yet still, though in extreme decrepitude, it has not exceeded the age assigned by naturalists as that beyond which the life of the Apple does not extend. But then another question will arise, supposing our Golden Pippin does not appear to survive the allotted period. Who will undertake to demonstrate that the Golden Pippin of 1509 still exists? It is quite certain that a majority of the Apples for which the title of Golden Pippin is claimed have no pretensions to the distinction, and more than one old person with whom it was once a favourite fruit now declare that it is no longer obtainable. Be this as it may, even if the tree in question has not already departed, yet even those who maintain that it is still to be found lingering in our fruit gardens, acknowledge that it is in the last stage of decrepitude and decay; it is following the universal law of nature; no organised creature shall endure through all time. Grafting may postpone the arrival of death, as the transfusion of blood will revive for a while the sinking animal, but the postponement cannot be for a time indefinite; the day must come, in both the animal and the scion, when its vessels shall be without the energy to propel or assimilate the vital fluid, though afforded to it from the most youthful and most vigorous source. The Golden Pippin is said to be a native of Sussex, and to have been first reared at Barham Park, situated on the north side of the South Downs. The Dutch acknowledged it to be an English Apple in their catalogue of fruits, where it is called the "Engelsche goud Pepping." The French call it "Pippin d'Or," which is a translation of the English name. Worlidge notices the Golden Pippin, and says, "it is smaller than the Orange Apple, else much like it in colour, taste, and long-keeping." Evelyn observes in his Diary, 22nd October, 1685, that "at Lord Clarendon's seat at Swallowfield, Berks, there is an orchard of 1,000 Golden and other cider Pippins." Catherine, Empress of Russia, was so fond of this Apple that she was regularly supplied with it from England; and, in order that she might have it in the greatest perfection, each Apple was separately enveloped in silver paper before it was packed.—("Phillips' History of Fruits," 34.)

We have already noticed the early existence of Apple orchards in the south-west of England, and we must not close this section without some further remarks upon that great cider district. Evelyn says that Herefordshire alone, in his time, was known to produce annually 50,000 hogsheads of cider, and, proceeding to remark on some of the Apples employed in its manufacture, states that the Red-streak was a pure wilding, and within the memory of some then (1676) living was named the Scudamore's Crab, and not much known save in the neighbourhood. It is to the perseverance of Lord Scudamore, thus commemorated, that the orchards in that district are indebted for some of their best varieties. He was our Ambassador to the Court of France during the reign of Charles I., and he lost no opportunity of collecting scions of the best Apples he heard of on the Continent, and transmitting them to his west-country estates. These western county sources of cider found an able advocate in Dr. John Beale, who published in 1657 a little volume entitled "Herefordshire Orchards a pattern for all England," but only bearing on its title page his initials. He was a native of Herefordshire, which county he greatly benefited, as Gough in his Topography records. His family, which had long flourished in Herefordshire, seemed to inherit a zeal for the plantation of orchards, and the individual of whom we are now sketching the biography was fully gifted with the family hereditament. He so raised and extended the reputation of the orchards of his county, and their produce, that in a few years it gained some hundred thousands of pounds by the increased reputation. His enthusiastic love of the agricola arts is manifested in every one of his writings. He was a man of talent, and the companion of the men of genius contemporary with him.

Many of his letters are preserved in Boyle's works. That philosopher thus speaks of him: "There is not in life, a man in this whole island, nor on the continents beyond the seas, that could be made more universally useful to do good to all." He was in the Church, was a member of Corpus Christi College, Oxford, and had the degree of Doctor of Divinity conferred upon him in 1683 by that University. It is stated that the same year was that of his death, and that he was then of the full age of eighty. Speaking of himself, he says, "My education was amongst scholars in academies, where I spent many years in conversing with books only. A little before our wars began I spent two summers in travelling towards the south, with purpose to learn to know men and foreign manners. Since my return I have been constantly employed in a weighty office, by which I am not disengaged from the care of our public welfare." What "weighty office" he filled, we know not; but it is certain that he devoted himself to other sciences besides those con-



FILMY FERNS AND JET d'EAU.

nected with the culture of the soil, for a letter has been published written to him by Mr. Evelyn, relative to his (Dr. B.'s) discoveries in optical glasses.

Filmy Ferns: Todeas.

The illustrations given above shows part of the Todea house at Malmain, Frenchay, near Bristol. The Ferns are in a carefully shaded lean-to house, and are about fifty in number. They are the property of Captain Belfield, and were collected by him many years ago in New Zealand. Principally they include three species, *T. superba*, *T. barbara*, and *T. pellucida*. The last named kind is represented by some magnificent specimens. The one shown on page 419 measures over 8ft across, and the rhizome or stem is over 3ft in circumference. The age is known by this stem, and Mr. Rye estimates the longevity of the larger ones at Malmain at over 100 years.

On entering the house, even the unskilled in horticulture cannot fail to be impressed by the pretty spectacle which meets the eye. A winding path runs the length of the house, on either side the Ferns are placed on rustic moss-covered stands, the water dripping from the delicate dark green fronds, completes a picture to which no photograph can do justice. The atmosphere has to be kept damp, and the Ferns frequently sprinkled with water. In winter it is not unusual to see icicles hanging from the fronds without the slightest injury to the plants.

I was privileged to see the fernery by candle-light in winter. It was like stepping into fairyland; the long icicles hanging from the dark green fronds (?) sparkled like diamonds, and presented a weird and enchanting appearance. The Ferns are a remarkably healthy and thriving lot, and their excellence may be judged from the number of silver cups Captain Belfield has won with them. Owing to the weak light I could not get a photograph of the other part of the house where the larger specimens were. I am indebted to Mr. Rye, the head gardener, for his courtesy, which will no doubt be extended to any of your readers should they visit Frenchay.—E. E. W.

Plants Worthy of Improvement.*

(Concluded from page 374).

Wild Vegetables, Salad, and Pot Herbs.

It is curious how some of our most important native vegetables are found near the sea. Of these are Cabbage, Seakale, Beet, Celery, Carrot, and Asparagus. Horseradish and Smyrnium (Alexanders) also show a liking for the shore, as also "scurvy grass," which is an excellent salad when young as raised from seeds like Mustard and Cress. It was the great anti-scorbutic, and much sought after and eaten by sailors as a preventive or remedy for scurvy before the discovery of lime juice, the specific now so extensively and widely used. The wild Radish is also a sea-shore plant, and its seeds, like those of Charlock or Turnip, yield excellent salading as quickly grown under glass. Chicory (Endive), Lettuce, Dandelion (forced and blanched) and Watercress are all well-known and excellent salads or vegetables raw or cooked. Asparagus, Seakale, Watercress, Horseradish, and Dandelion have been very little improved by cultivation or by seminal selection, and experiments on each and all would be likely to yield valuable results.

The same may be said of the meadow mushrooms (*Agaricus campestris* and *A. arvensis*), and there seems no reason why "virgin spawn," or spawn made direct from the spores, of fifteen or twenty other edible fungi should not be made and cultivated for food. The most delicious and valuable of all fungi, viz., the best edible kinds of truffles, certainly deserve more attention as to culture and discovery than they have yet received. The chances are that many tons of the edible fungi of our woods and meadows are lost every year, mainly owing to vulgar prejudice and ignorance as to the difference between good and bad kinds. It is not generally known how easily the meadow mushroom may be grown in paddocks or meadows or in orchards near the house, by simply planting lumps of spawn in the grass in June or July; old Cucumber, Melon, or Marrow beds "inoculated" with spawn in lumps the size of hens' eggs also prove very productive.

If children were taught by actual experience afield and in the kitchen how delicious many of our common fungi really are they would be much more often gathered and used. One of the earliest to appear is the St. George's mushroom (*Agaricus gambosus*), so called because it often appears as early as on St. George's Day. It is the "mouscron," or "mousseron," of the French, the moss champignon, why so called no one knows, because it is a meadow or pasture growing species. From April until November, when the "blewits" appear, we have a constant succession of good and edible kinds—those interested may consult Cooke's "British Edible Fungi" for figures and other details.

The seaweeds of our coast lines have not had much attention given them since kelp-burning has been superseded by chemical products or by barilla. Algin is a product of some importance, useful for size, as a mordant in dyeing, and it is valuable for preventing the incrustation of boiler tubes, &c. Algic cellulose is also valuable, and can be bleached, turned and polished, or made into paper, and in combination with shellac forms a cheap non-conductor of electricity of great value. Algin, as combined with seaweed charcoal, is called "Carbon Cement," and is used in covering boilers and exposed steampipes, being one of the best of solid non-conductors of heat at present known. As food plants some seaweeds deserve attention. Green and pink laver may be eaten in soups, and dulse as boiled in milk is a noted Scotch delicacy, as is "sloke" in Ireland. Glue and jellies of various kinds are made from seaweed, as also an excellent substitute for isinglass. Carrageen, or Irish moss, has long been used as food, and as boiled for cattle feeding. It consists of *Chondrus crispus* and other species. It is well to know that the more tender of all seaweeds, like the young fronds and stipes of all ferns, may be boiled and eaten in all cases of emergency. We have no true moss of any value

* An essay published in the Journal of the Royal Horticultural Society from the pen of Mr. F. W. Burbidge M.A., F.L.S.

as an edible product, but bog moss, or sphagnum, and green wood moss, or hypnum, of various kinds, are very valuable to the growers of tropical orchids and of other greenhouse flowers. Amongst salads, pot-herbs, and other useful plants the best of native origin are—mint (menthol), thyme (thymol), caraway, coriander, camomile, yarrow, lettuce, endive or chicory, dandelion, angelica, mustard and cress, burnet, horseradish, garden radishes, watercress, sorrel, scurvy grass, eryngium roots candied, samphire for pickling, fennel, dill, marjoram, savory, wormwood, elderflowers for toilet water, wine or vinegar, hop and nettle tops, Good King Henry (*Chenopodium Bonus Henricus*), leeks, alexanders (now supplanted by celery), to say nothing of edible lichens, seaweeds, and fungi of many kinds to which we have already referred.

How to Improve the Best of our Native Wildings.

The first thing is to feel a want, some ideal standard of excellence must be set up, to which it is thought any particular plant or product may be wisely made to conform. The habit of the plant may be bettered, the size or shape or colour and flavour of its flowers or its fruits, roots, or leaves may be enhanced or improved; but whatever the earnest or long-felt want may be, will it so, stick to the point persistently, and ultimately in a great measure, even if not wholly, you will find the old adage verified that "all things come to those who will and wait." In all arts and crafts the first great motor power is the will, or the imagination, and this in the main is where the great artist differs from the merely clever and dexterous workman or maker of things inanimate on canvas or in wood and stone. But in improving the wild plants you are remodelling life itself; yours is a nobler duty than that of the artist, who simply imitates and ennobles inanimate, or even animate things. You are nearer to nature, and are really and truly carrying on the life work, the evolution of beautiful and useful created things. Having formed a clear idea as to the plant or plants best worth improving, the next point is to select the best wild varieties as breeders. Thus, in the case of the Blackberry, you will choose forms remarkable for at least one good quality—it may be size, or flavour, or a good and prolific habit of growth and fruiting, and these may be further improved by cross-breeding the selected wild parents under good cultivation. Good culture does not always mean a deep, rich, heavily manured soil. The Blackberry often does its best amongst rocks and Furze bushes, or in Hawthorn or Sloe hedges, where its roots have to compete with others for earth food, but where they have shelter and support. Our failures with the best American kinds may be due to their having been grown alone in too rich earth in part, and also to the lack of bright sunshine, or of too much moisture. Then the Blackberry is naturally a climber, and one that prefers a living support to a dead one. A hedge of Bullace-plums and Blackberries might prove an ideal way on many dry warm soils. Both Plums and other stone fruits like chalk or limestone soils, which also suit Blackberries well; so that there is a double advantage in growing both together.

Plant improvement is effected by:—1. Forming a strong and high ideal of what is beautiful or desirable. 2. Selection of the best or most suitable wild kinds and garden varieties. 3. By good culture of the finest of garden varieties. 4. By selection of the best garden-reared seedlings. 5. By careful cross-breeding the best wild and cultivated varieties.

6. By hybridising distinct species, or a distinct species and a garden or Continental wild variety together; and of course all these operations and phases of culture and improvement may be carried out side by side at the same time.

7. In the case of many good and distinct things like caltha, the greater buttercup, lily of the valley, asparagus, seakale, blackberry, &c., simply selection from seed or judicious cross-breeding would probably yield better results than hybridisation with other species.

In modern science, in politics, and even modern novels we often hear of what is called the "psychological moment," or the exact time for prompt action and all due appreciation. I am old enough to remember when yellow blossoms as a class were scouted and rated vulgar—when Daffodils were not valued as indoor flowers. The Maréchal Niel Rose was one of the first of yellow flowers that became popular and started the "yellow fever" that culminated in the sunflower craze. Yellow Daffodils always grew in our

meadows and copses, and they had been grown in gardens in a tentative sort of way for two or three centuries before they became really popular and abundantly improved from seed. Sometimes, Shakespeare notwithstanding, a mere change of name leads to plants becoming popular. The Japanese Funkias never become universally grown and appreciated until a clever man called them 'Plantain Lilies.' It has been argued that the name is wrong, because Funkias have nothing to do with Plantains, and that they are not true Lilies; but in practice we often find that things "take" or "catch on" under euphonious names.

Another case in point may here be cited, namely, the beautiful and variable race of yellow-anthered "Shirley Poppies," which were selections from the common black-anthered "Field Poppy" (*Papaver Rhæas*) made by the



TODEA SUPERBA (See page 418)

secretary of this society some years ago. Selections from the same parent had been made before and grown in a half-hearted way in our gardens as the "French" or "carnation" Poppy, but it lacked the advantages of time and place, there was no strong individual will with high ideals behind it, not even paternal love, let us say. Fortunately authors need no patronage to-day, but the plants, and especially new breeds or races and strains, are much the better for having earnest sponsors, real strong-minded and independent cultivators, who firmly believe in their beauty, in their utility, or at least in their sterling adaptability to certain uses and ends. So you see, apart from improvement, we must try to catch a propitious time, or we must wait until the right time comes for their "coming out." Above all, select short and pretty names for your seedlings, and make sure of a kindly god-father, and don't resent kindly and independent suggestions.

Chiswick Lectures.

The third of a series of lectures, extending till Christmas, and given on each alternate Thursday, was delivered in the Council Room, Royal Horticultural Society's Gardens, Chiswick, on the evening of October 31, by Mr. George Massee, mycologist, Kew. The object of the lectures is to afford gardeners resident in the neighbourhood, knowledge of the general capabilities of fungi, which are the cause of all diseases among garden plants. The subject of Thursday last was "Some Diseases of Herbaceous Plants," and on November 14 the subject will be "Some Diseases of Fruit and other Trees." The meetings begin at 7.30 prompt, and are interestingly illustrated by drawings.

NOTES & NOTICES

Royal Horticultural Society.

The next Fruit and Flower Show of the Royal Horticultural Society will be held on Tuesday, November 12, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "Insecticides, Spraying for Fungi," &c., will be given by Mr. R. Newstead, F.E.S., at three o'clock. * * At a general meeting of the Royal Horticultural Society, held on Tuesday, Oct. 29, thirty-nine new Fellows were elected, amongst them being the Countess of Clonmel, Hon. Mrs. Trelawny, and Lieutenant-Colonel Lionel Benson, making a total of 829 elected since the beginning of the present year.

School Gardening.

Scientific gardening is taught in the national schools of Sweden and in the seminaries for the education of national school teachers. There is a school garden in nearly every rural school district in the kingdom. The garden is placed near the school-house, and the children receive practical instruction in the cultivation of plants, berries, flowers, herbs, and fruits, the management of hotbeds, greenhouses, and so forth. The parishes are required to furnish the necessary ground for the gardens, and trees and shrubs are annually given to the children to be planted at their homes.

The Potato Harvest in Lincolnshire.

The Potato harvest in the Fen district of Lincolnshire is now about completed. On the whole, fine weather has favoured the work, and as the tubers have generally been dug up dry, the cost of picking has not been so great. The crops have turned out better than was at one time expected. Many have yielded as much as ten tons per acre, but the prices are not so remunerative as in some previous seasons. Disease has affected many of the delicate sorts, but the standard varieties have withstood the blight very well. That Potato growing is a paying industry is shown by the fact that a much larger acreage has been devoted to the tuber this year than usual in the southern part of Lincolnshire.

Mushroom Gathering.

At a meeting of the Council of the North Lancashire Farmers' Association, Mr. W. Fitzherbert, J.P., stated that as the result of representations from that association there was every probability that next year there would be no clashing of the dates of the Preston and Lancashire cheese fairs. A letter from the Carnforth branch was read containing a resolution calling attention to the damage done by trespassers in gathering Mushrooms, and requesting that steps should be taken to secure legislation on the question. The chairman suggested that the subject might be recommended for discussion at a meeting of the Central Chamber of Agriculture, and a resolution was passed expressing the desirability of making the law of trespass more stringent.

Chrysanthemums at Battersea Park.

For the last ten days or more, and for some time to come, Chrysanthemums in great resplendency have been on public view in one of the greenhouses within Battersea Park. The effect of the great body of closely placed blooms, looking from end to end of the long, hip-span house, is one of satisfying richness, remarkable colour effect, and brilliance. The beautiful variety Margot adorns the entire space of the end walls over the doorways, while along the back staging are spreading masses of small-flowered decorative varieties, including such as La Vouge, deep yellow; Rosinante, pale peach-pink; Sunset, deep crimson red; Lady Selborne, Sœur Melaine, Snowdrop, Source d'Or, and its crimson sport. These are in large pots, the stems being bent down to form a hedge, and conveying alternate colours. The Japanese and a few incurved varieties in the body-mass of plants are all displaying creditable blooms, the best representatives being Matthew Hodgson, Mme. E. Rogers, Vivian Morel, Modesto, Mrs. H. Weeks, Charles Davis, Lady Byron, R. Hooper Pearson, Edith Tabor, Mrs. S. C. Probin, with N.C.S. Jubilee and Lord Alcester.

Aberdeen Chrysanthemum Society.

The Queen has been graciously pleased to become patron of this society—an announcement which will be most gratifying to the members and friends. The annual exhibition of the society promises to be a record one. The arrangements are well forward, and all particulars may be obtained from the secretary, Mr. M. H. Sinclair, 18, Market Street.

Mr. George Nicholson, V.M.H.

In a letter, characteristically good humoured and earnest, sent to us by Mr. George Nicholson in reference to our expressions in favour of a testimonial, made on page 399, last week, he ends by saying, "I should be very sorry, indeed, if any appeal were made on my behalf, and I can assure you that so far as I am concerned, it is not needed"; which last expression we all know to be true in this, that every intelligent horticulturist and botanist recognises the individual obligations they owe to the past labours of George Nicholson.

Fruit Culture in Cumberland.

Mr. Berry, of the Durham College of Science, lecturer on horticulture to the Cumberland County Council, in a report to the latter body, says he is again incited to urge upon the committee the advisability of establishing a fruit plot or two in the county, where a fair number of Apples, Pears, and Plums might be tested, where lessons on feeding, pruning, &c., might be given, and the varieties most suited to the county brought before the public. If a little more attention was given by farmers and fruit growers to planting of trees and the feeding of their trees when planted, they could grow Apples, at least in Cumberland, which in point of quality and flavour would equal if not surpass foreign fruit.

Potato Dispute in Fife.

In Kirkcaldy Sheriff Court, on October 23, Sheriff Gillespie decided an action at the instance of Mr. David Stevenson, farmer, Sauchenbush, who sued Mr. Thomas Culbert, Potato merchant, Chapel, Kirkcaldy, for £28 5s. as balance of account for Potatoes purchased by defender at a sale on Sauchenbush Farm, defender having paid £160 to account, and left the balance sued for. The pursuer stated that he informed defender that he would not accept the £160 in full payment, and the words "in full payment" now appearing on the cheque were not on the cheque when handed by defender to pursuer. The defender contended that the £160 was paid in full of pursuer's account of £188 5s., pursuer arranging to deduct £28 5s. in consequence of the Potatoes sold as British Queens being largely mixed with Maincrops. His Lordship, in his interlocutor, decided for the pursuer, finding him entitled to the sum sued for, less £2 deducted for the presence of Maincrops among the British Queens, and also found the defender liable to the pursuer in the expenses of process.

Help for Gardeners in Distress.

The Gardeners' Royal Benevolent Institution exists for the purpose of lending the necessary succour required by those many gardeners who, through no fault of their own, fall upon hard times in later life. Perhaps a sensational appeal to the hearts of gardeners who enjoy robust health and fair prosperity might do some good, and bring home to the fraternity at large what so many already recognise as a sacred duty, and that is, to give whatever help they can in the way of subscriptions to so blessed an institution. There is an able gentleman as secretary, who works hard and wields a very great influence with men of position, and his constant endeavour is to come closer in contact with gardeners themselves, and one way of doing this is to inaugurate concerts here and there throughout the country, the drawings from which swell the funds that are to be used to give pensions and donations to aged gardeners or their widows. With the very valuable aid of Mr. Arthur Joseph Brown, Superintendent of the garden department attached to the School of Handicrafts out at Chertsey, in Surrey, a concert has been arranged to be held on Thursday next, November 14, within the Constitutional Hall, Chertsey. We cannot do more than give notice to those of our readers in that part of the Thames Valley, and we do trust their patronage will be forthcoming. For the honour of the profession, we plead that our gardening friends, not in Chertsey alone, but everywhere, will make a resolve to assist the Gardeners' Royal Benevolent Institution, whose offices are at 175, Victoria Street, S.W.

Gardening Appointment.

Mr. Alfred Lodge, for seven years head gardener to Lord Iveagh, K.P., Elveden, Suffolk, and previously sixteen years head gardener to Lord Brougham, Penrith, Cumberland, as head gardener to Mrs. Heywood-Lonsdale, Cloverley, Whitchurch, Salop.

Chrysanthemums at Swanley.

Last Saturday seemed like a great fête day at Messrs. Cannell's nursery, for visitors by the score were flocking in through the gates en route for the Chrysanthemum houses. The blooms were all in grand condition on the 2nd inst., but will have reached their hey-day by Saturday next. We have detailed notes of the novelties which will shortly appear.

Sussex Rainfall.

The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 3.26in, being 0.61in below the average. The heaviest fall was 0.58in, on the 21st. Rain fell on fifteen days. The maximum temperature was 73 deg. on the 1st, the minimum 28 deg. on the 27th; mean maximum, 58.22 deg.; mean minimum, 42.03 deg.; mean temperature, 50.14 deg., which is 1.50 deg. above the average.—R. I.

Chrysanthemum Growers' Social Evening.

The annual dinner of the National Chrysanthemum Society will take place on Wednesday, November 27, at the Holborn Restaurant, at 6.15 p.m. The new President of the society, Sir A. K. Rollit, M.P., will preside, and the Challenge Trophy, Holmes' Memorial, and other cups and medals will be presented to the winners during the evening. The presence of ladies is particularly invited.

Oranges in the "Island Continent."

A satisfactory increase in the culture of Oranges in Australia is returned under this heading for the past as compared with the previous year both in area and yield. For 1900 there were returned 2,882 acres, yielding 2,041,068 dozen, against 2,324 acres, yielding 1,420,839 dozen in 1899, being an increase of 558 acres and 620,229 dozen in yield. The area of productive trees was 2,045 acres, and of non-productive, 837 acres. Total production in 1900 was 2,041,068 dozen.

Cardiff Gardeners' Association.

The third meeting of session took place at the Central Free Library, Cardiff, on Tuesday, October 29. Mr. G. Tolman presided. Mr. John Ballinger, chief librarian, received the members, and, in a short speech, he introduced to the members some of the latest and most valuable additions to the library relating to horticulture, and the major portion of the books published from the bulletin in *Journal of Horticulture*, September 26 last. Special attention was drawn to the fact of the very high prices paid for some of the works which he had placed before the members, "Reichenbachia," one of the latest, costing nearly £50. After a couple of pleasant hours had been spent there, before closing the business a very hearty vote of thanks was accorded Mr. Ballinger for his courtesy and the untiring consideration he has for providing all that is within his reach in the way of literature for the benefit of all lovers of horticulture.

Moffat Trees Action.

Sheriff Campion, at Dumfries, has issued his judgment in the action brought by the heritors of the parish of Moffat against the Town Council of the burgh, to have them prevented from carrying out a resolution to cut down five venerable Lime trees in front of the parish church. The Council had, by a majority of one vote, resolved to take this step on two grounds; first, that it was necessary in order to widen the roadway; second, that the trees were a source of danger, being partially decayed, and their principal roots having been cut in the course of work connected with the building of a new wall round the church grounds, on the one hand, and the lowering of the roadway on the other. The trees stand outside the wall which encloses the church ground, and are separated from it by a footpath, but the heritors alleged that both trees and footpath are upon church land. They also led evidence to show that the trees were sound. The Sheriff finds that the heritors have failed to establish a right of ownership in the trees, and that the removal of them is a matter entirely in the discretion of the Town Council, as the authority responsible for the care of the roads and streets. His Lordship therefore dismisses the action, and finds the heritors liable in expenses.

National Dahlia Society.

On Tuesday, October 29, at a meeting of this society, it was agreed to recommend to the Fellows that a two-days show be held in the Drill Hall next September. On the first day the show would be held in connection with the meeting of the Royal Horticultural Society up till 5 p.m., after which hour up till 10 p.m., as well as during the whole of the following day, the show would be held under the auspices of the Dahlia Society only.

Legal Notes: Lord Penrhyn and His Trees.

At Bangor Petty Sessions, on October 22, J. O'Brien, Llanrwst, was summoned for stealing the branches of certain shrubs from a cover, the property of Lord Penrhyn. Mr. H. C. Vincent prosecuted, and said that some years ago Lord Penrhyn went to a great deal of expense in planting Barberry trees, ornamental plants in covers, near Aber Railway Station. There were eight beds of these ornamental trees, each containing about fifty plants, and each of these plants was valued at 2s. 6d. A keeper, named Pryke, heard a noise in the cover on September 18, and found the defendant there with a large sack on his back full of Barberry branches. There was another sack upon the ground full of the branches. The covers were completely wrecked, every single tree being stripped of its branches, not cut, but crudely removed. On that day two large sacks of these branches were consigned by the defendant to a firm near Manchester, which used them for medicinal purposes. Mr. Richards, the forester of the Penrhyn estate, saw the head of this firm, who told him that bundles of these branches which were used for decorating purposes, were sold at 2s. a dozen. The defendant, who did not appear, was fined £5 and costs, or a month, with hard labour.

Swanley Horticultural College.

About 250 friends and past and present students met in a social way last Saturday afternoon at the above-named institution. The day was perfectly delightful, and allowed the numerous company to enjoy the grounds, and inspect, with pleasure, the glass ranges, including the large Chrysanthemum house and the newly erected conservatories, splendidly finished by Messrs. Richardson and Co., of Darlington. These new erections are now being stocked with plants. The show house of Chrysanthemums displayed plants bearing exceedingly handsome blooms, the varieties being the best of those introduced during recent years. Incurved representatives are a special feature of the College collection. Though the foliage was robust and healthy, we yet found the dreaded "rust" in numerous colonies upon the leaves. Rust is becoming much too prevalent, and, for the sake of growers everywhere, there should be perfect measures taken to stamp it out wherever it may appear. Tea was served in a lower room of the College, then at four o'clock Mr. A. F. Sieveking delivered a lecture, illustrated by limelight slides, on the "History and Literature of Gardens." Our detailed notes of this interesting lecture will be reserved till another time. The afternoon was enjoyed by everyone, and must have satisfied all who had a special interest in its success.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. October and November.										
Sunday ...27	N.N.E.	deg. 32.7	deg. 32.2	deg. 56.6	deg. 29.9	Ins. —	deg. 44.1	deg. 50.0	deg. 53.5	deg. 27.8
Monday ...28	W.S.W.	53.4	50.5	60.2	32.8	—	45.8	49.5	53.2	35.2
Tuesday ...29	S.E.	53.4	52.0	56.1	51.5	—	49.3	50.0	53.0	49.0
Wed'sday 30	E.S.E.	52.4	49.2	56.1	50.4	—	50.5	50.8	52.8	48.0
Thursday 31	E.S.E.	50.7	43.4	55.5	47.0	—	48.9	51.2	52.8	37.5
Friday ... 1	E.S.E.	47.6	43.9	51.6	44.6	—	47.1	50.8	52.7	37.2
Saturday 2	E.S.E.	41.8	39.8	53.1	36.0	—	45.2	50.2	52.7	27.2
MEANS ...		47.4	44.4	55.6	41.7	Total —	47.3	50.4	53.0	37.4

Dull dry weather has prevailed during the past week, with cold wind and a few hours of bright sunshine.



The Yellow-fruited Yew.

Probably few readers are aware of this species, yet of the many bright-fruited, hardy plants this is certainly one of the most beautiful in seasons when a good crop of fruit is borne. This year it has set fruits particularly freely at Kew, and makes a conspicuous object among its red-fruited neighbours. The fleshy cups which surround the little, hard, brownish-green nuts are in this case larger than those of the red fruits, and are correspondingly more conspicuous. Though pleasant to look on at any time, the golden fruits are most attractive when the sun is shining on the plant. Although it differs so in colour of fruit from the common Yew, it is but a variety of that species, the correct name being *Taxus, baccata* var *fructu-luteo*.—D.

Early Dessert Apples.

The article under the above heading that appeared in the fruit number of October 10, from Mr. H. Richards, draws my attention to an old variety but seldom mentioned, namely, the Summer Thorle. Though I have not seen it for some years, I have a vivid recollection of several old trees and the capital crops of handsome and, for an early Apple, well flavoured fruit they bore. The fruit, as I remember it, was below medium size, slightly flat, with a perfectly round outline, and was beautifully coloured. The flavour was also good, especially when well ripened upon the tree, and possessed a certain briskness which is lacking in several of the better known early varieties of to-day.

Of its keeping properties after being gathered I should not like to speak positively, but it would keep some little time and still be good, which is more than could be said of most earlies. My appetite is whetted by the description of Washington Apple by Mr. Orchard. Can anyone else corroborate his description from experience?—J. C. A., E. Yorks.

Gardeners' Mutual Improvement Societies.

It has often been said that the gardener belongs to one of the most intelligent classes of men; and the remark is certainly quite justifiable, as evidenced by the numerous reports from week to week of gardeners' mutual improvement meetings. The reader cannot but notice the steady growth of these influential societies, and the very great interest that is taken in them by the gardening fraternity throughout the length and breadth of the country. There is not a possible doubt that they are doing a grand work in bringing closer together the workers of the soil. I have often heard it remarked that we gardeners are a selfish lot, not caring to enlighten our fellow men out of our own book of knowledge, and what we know we carefully keep wrapped up within ourselves. This slur can be easily answered and exploded by visiting one or more of the now numerous meetings of our mutual improvement bodies, which are held at regular intervals throughout the year. I visited one of these meetings only last week, and was struck to observe the eager desire to learn anything fresh which was evinced by those present. Every word the essayist read was carefully heard, and mentally made note of; and after the paper was finished, the discussion which followed was, to my mind, sufficient to put aside any feeling of selfishness or jealousy which our friends would have us believe existed amongst gardeners.

Our profession is one in which something always can be learnt, and it behoves all young men to make a special study of their business, whether they pursue the art of floral and plant culture, or any other calling. To gain practical knowledge, I would advise all young gardeners (ay! and the old ones, too) to join the nearest Mutual Improvement Association, where, at the meetings, he will hear of "something to his advantage." Reading books on horticulture is imperative to every lover of plant life, in which he will find gold mines of information. The horticultural papers are always well worth their money (far before the trashy literature which is so thick upon the market at the present time), and are a boon to the gardener of to-day, who has many difficult problems to grapple with. Where will one find more interesting articles than are to be found in our better-class gardening papers issued at prices within the reach of all? A good gardening paper, then, is indispensable in the gardener's library.

But these gardeners' improvement societies provide a means of airing one's opinions and hearing each other's experiences—which are various—and by comparing notes a very great deal of valuable information is gained. Now, it is not every man, who, able as he may be as a gardener and successful as an exhibitor,

can put his thoughts on paper, and read his essay before his fellow gardeners. He is usually afraid of its being pulled to pieces, so to speak, by his audience. To my mind, this is a very good ordeal to undergo. When a man sits down to write a horticultural paper, before he takes up his pen he must of necessity read and study his subject in every detail. This freshens up his knowledge and gives him new ideas to think out, and, above all, makes him enter into it with a determination to master the points. I therefore say that writing a paper is undoubtedly one of the best means to make one become acquainted with a subject, and to possess accurate information on that subject.

There is another good point in favour of gardeners' societies, and this is that the subscriptions are not usually large. The one to which I belong necessitates only 2s. 6d. per year. This includes a course of eighteen lectures on all subjects interesting to horticulturists. When one thinks of the enormous amount of information given in these eighteen lectures by practical men, who is surprised that these societies flourish as they do? Our own syllabus for the coming half-year, from now to April next, comprises the following papers:—"Climbing Plants," "The Dahlia," "Lawns and Pleasure Grounds," "Insects" (by the society's own consulting entomologist, who gives his services gratis): "Stove Plants," "Chemical Manures," "Tuberose and Primulas," "Rosaceæ," "Violets," "Cinerarias," and "Vegetables." What more could one want for his half-crown? He must be greedy indeed who grudges this outlay!

I maintain that the information to be gained by attending this course of lectures is worth pounds, shillings, and pence to all who love their plants and their profession. What advantages are placed before the young gardener of to-day compared with our forefathers! There is no wonder that we see young gardeners rising to the topmost rung of the professional ladder when they have the help of gardeners' Mutual Improvement Associations.—H. K.

Young Gardeners' Testimonials.

"Toot," on page 396, raises an interesting question, but I think he is somewhat inclined to magnify the importance of testimonials. I believe there are very few head gardeners in these days who require to know anything further about a young man than where he was last, and what he did there, and how he conducted himself. These particulars can best be procured from his late chief direct, as I know from experience. Some years ago, from the fact of a young man having applied to me for a situation which I had vacant, and he sent on such excellent testimonials that I engaged him at once, without taking the trouble to write to the various head gardeners he had been under. A short experience of his character and abilities was sufficient for me. I then wrote to the last address, and found that the gardener had given him a good character because he "did not like to do otherwise when giving it to the young man personally." This was his own expression. Had he been writing to me direct he would have had "a different tale to tell." Since then I have never asked for testimonials in engaging a young man, nor would I give one unless it were particularly desired. No, "Toot," a few lines in confidence between gardeners is of more importance to a young man than a dozen fulsome testimonials.—HEAD GARDENER.

Regarding Apples.

Recently we did our best to name a variety of Apple sent us by the Northumberland correspondent whose interesting letter is appended. Without further introduction we submit the remarks by Mr. Fordyce. "Your note reached me yesterday re Apple to name, and which you named 'Beauty of Kent.' I think there is a mistake somewhere, as I grew a tree for some years which I got from Messrs. Rivers and Son, Sawbridgeworth, named Beauty of Kent, and they are usually exact in naming their trees.

"The fruit is like the Apple I sent you, but yet is distinct. My tree of Beauty of Kent grew and fruited very well for a few years; then it got into a bad state of health, became cankered, and ceased to bear, owing, I think, to the climate being too cold for it. I therefore cut it down two years ago, and regrafted it with a hardier variety. The late Dr. Hogg would doubtless have known the Apple very well, as it was a very popular variety on the Tweed side sixty or seventy years ago, and brought a better price in the market than any other variety of Apple in this district, owing to its size and colour.

"The trees that I have seen of it are all large and old; I should say not less than a hundred years old at least, and are all 'worked' on the Crab stock. There does not appear to have been any trees worked on the Paradise stock since it began to be used in this part of the country, and that is about fifty years ago. Why, I cannot understand, as the tree is hardy and a constant bearer. Owing to the time the fruit ripens (about the latter end of August or beginning of September), the tree gets 'braced up' again before the winter. I am sorry that I cannot send another fruit this year, as the one sent was the last I had; but should I be spared for another year, I will endeavour to send you two or three.—JOHN FORDYCE."

The Loquat.

Fruit culture, both under glass and in the open air, receives much attention in England; yet, though the varieties of fruits already established in gardens are being continually increased, few efforts are being made in a systematic manner to extend the number of distinct kinds in use. Bananas, some edible Passifloras, and *Eugenia Ugni*, have in some cases been brought into cultivation, the Banana more generally, yet very many gardeners totally

the Royal Horticultural Society's Transactions, published in 1822. A letter is there printed which records the fruiting of a tree in Staffordshire. Fruits were produced during several years, generally of very fine quality, and extremely numerous, as many as twenty-one having been borne on one branch. The cultural method adopted was to place the trees out of doors during the summer, removing them to a warm tan-bed under glass in September. The flowers generally expanded in December, and the fruits were ripe in April. There are scarcely any authenticated instances of trees maturing fruit out of doors in England, though in the south of France, Malta, and littoral regions, it



ERIOBOTRYA JAPONICA (THE LOQUAT).

neglect them. Many other famed tropical and sub-tropical fruits are grown in a few establishments more as curiosities than for any practical purposes, and yet there is little doubt that if more attention were paid to them satisfactory results would be obtained, and many a dish of novel and richly flavoured fruits could be added to the dessert.

The Loquat is now by no means rare, though it seldomly is so grown as to have edible fruits. In southern counties, however, it thrives against walls in the open air, and is rarely injured except by severe frosts. The first record we have of a tree producing fruits in England occurs in the third volume of

produces fruit freely. Perhaps a trial may now be made by many who have not hitherto included this rosaceous shrub. Some authorities include the Loquat under *Photinia*.

An Extraordinary Mushroom.

Last week, a Mr. Walter Warren found, near Stretton-on-Dunsmore, an immense Mushroom, measuring 40in round the edge, 14in across, and weighing 2½lb. It was well shaped and in good condition.



Crocuses from Greece.

Mr. Bowles sent specimens to the Scientific Committee of the following species:—*C. Tournefortei*, remarkable for never closing after the perianth has once opened; *C. ochroleucus*, with eight segments to the perianth and eight stamens; *C. sativus* v. *cashmirianus* and v. *Elwesi*, a scarce form; *C. longiflorus*, vars. *Wilhelmi*, and *melitensis* with striped perianth leaves; *C. marathonisius*, a new Greek species; and *C. lævigatus*, showing much range of colouring, including a pure white form.

Acacia alata.

Once seen and examined, this distinctive species of March flowering *Acacia* is not readily forgotten. The flowers are orange yellow, and lie almost upon the broadly winged branches, for they possess very short peduncles. It is a much-branched species, and prefers border treatment rather than pot culture. The leaves assume the character of phyllodes, are short, bifarious, and decurrent. It was found near by the Swan River in 1840. Under suitable conditions it grows 6ft to 8ft high. It is very frequently called *Acacia platyptera*, but the "Index Kewensis" does not recognise the name.

Ferns Growing upon Ferns!

At the latest Scientific Committee meeting a proliferous Harts-tongue Fern was shown. Mr. Druery exhibited a growing plant, known as *Scolopendrium* v. *cristatum viviparum*, O'Kelly. It was a particularly proliferous seedling. Mr. Druery raised it from spores. The young fronds bore dense clusters of young plants all over their surfaces, while the original bears them far more sparsely. Mr. Druery also pointed out that the venation of the plants, like that of the parents, was partially reticulated, instead of being normally fureate and free. Fronds of three other species were produced which were affected by a peculiar dark brown spreading rot, which Mr. Druery said was contagious, simple contact of healthy fronds with fronds so affected leading to their rotting in like manner. Dr. Cooke undertook to examine whether it was of fungoid origin.

Thin-skinned Grapes.

The soil and atmosphere were recently saturated by the rain, and these have caused Black Hamburg and other thin-skinned Grapes to damp considerably. A slight warmth in the hot-water pipes of the vinery will be required almost constantly to maintain an equable temperature, but this must not be too high, or it will cause the Grapes to shrivel prematurely. A temperature of 40 to 45 deg. at night, and 50 deg. by day, will be sufficient, ventilating freely and early in bright weather, so as to prevent moisture being condensed on the berries. Outside borders should be covered with tarpaulin, or, preferably, lights, to throw off heavy rains; and if the inside borders are covered with dry straw this will prevent cracking and keep down moisture considerably. The great points are (1) ventilation and (2) a drip-proof roof.—G. A.

A New Variety of Gooseberry.

Some time ago we had from Mr. George Charlton, nurseryman, High Street, Morpeth, a shoot of a new Gooseberry named Victoria, and the said shoot was literally crowded with very large fruits; indeed we counted twenty-eight, all alike in being massive. The berries are smooth, and become ruddy when ripe. In shape they are perfectly oval; the skin is comparatively thick; the flavour is piquant, grateful to the palate. From the shoot sent, we would say it was a vigorous grower. The variety resembles Whinham's Industry in appearance. We forwarded fruits to two well known experts in different parts of the country, but their opinion of its flavour is unfortunately not favourable. In this respect it does not equal the old Crown Bob, Warrington, and several other red skin varieties, neither is it superior to Whinham's Industry. Its thick skin renders it a good market variety, however, and being also an abundant cropper it may stand high in this respect.

A New Plum.

The variety we refer to is the newly certificated Brown's Crimson Drop. It was shown before the Fruit Committee on October 15. From a reliable source we obtain the information that it is a sport from Coe's Golden Drop, which it resembles in all respects except the colour, which is a dull purplish crimson. The variety is good certainly, but the dull colour is objected to by some critics. It received an Award of Merit.

Rhus Cotinus.

Mr. Engleheart showed a mass of the abortive hairy flower stalks of the "wig tree," *Rhus Cotinus*, at the meeting of the Scientific Committee on October 29th. He had found it to be extremely useful for covering *Narcissus* seedlings. It keeps down mossy growths; it breaks frost, and keeps insects off; if it rain, worms are driven out by it. As some other species of *Rhus* secrete poisons, it was suggested that there might be something of this nature present. The tree had borne such large quantities this year, that he was able to cover 600 boxes, 8 by 8 inches in size, with a layer half an inch thick, which was sufficient to keep out the frost, whereas moss 1 inch in thickness does not do so.

A White Winter-flowering Begonia.

A correspondent near York, who writes under the nom de plume of "Henri," sends a very robust *Begonia*, partaking of the *Glorie de Lorraine* and *semperflorens* types, having fleshy leaves, smooth on the surface, and shining green. The flowers are white with yellow anthers, and are borne on graceful terminal trusses. "Henri," in his letter, says: "It is a seedling of my own raising, and is beautiful as a pot plant for decorative purposes. Its habit is very dwarf and compact, and its trusses of flowers are borne very freely." That we corroborate, and add that we think the variety is both useful and worthy of care. At the same time, after seeing the new whitish pink sport from "Gloire," and named Turnford Hall, we cannot say "Henri's" is the best of the winter *Begonias*.

The Partridge Berry.

For a group in a moist place on the rockery, an undergrowth to a *Rhododendron* bed, or a large mass in a semi-wild state in a garden where peat-loving plants thrive, the above plant, or, giving it its correct name, *Gaultheria procumbens*, makes an excellent subject. Naturally of dwarf stature, when growing luxuriantly it rarely exceeds 6in in height, but makes wide carpet-like masses with small oval leaves. Towards autumn many of the leaves assume a bronzy hue, which greatly adds to their appearance. Numerous flowers are borne in early summer, which are white and pendulous. In autumn the place of the flowers is taken by small, bright red fruits, which last in perfection for several months, being particularly conspicuous in early winter after a light fall of snow. It is a North American plant, and may be increased by division. Though preferring peaty soil, it sometimes does well in sandy loam to which leaf mould has been added.—K. D.

Almonds.

The *Amygdalis*, or Almond, is one of the most attractive early hardy flowering trees. It is of a deciduous character, but pushes forth into bloom earlier than any other hardy tree. The flowers are produced before the leaves, hence when in flower the spectacle of the dense mass of white, rose, and red blooms is gorgeous in the extreme. Tall standard trees, with a good head of branches rising above a clear, straight stem, might be an attractive feature in most shrubberies where a selection of evergreen and deciduous shrubs are grown. Not only are the high standard trees effective in the background of a shrubbery and other positions where the spacious heads may have room for their full development, but the low or dwarf standards are useful for intermixing and for positions towards the front.

This is a good time to plant the trees. They will grow and flower in any soil, but fruit best in a good, deep calcareous loam, as, like all stone fruits, they delight in lime and mineral matter. Small trees grown in pots are very effective in a cool house when in flower. The pruning of the trees is not an elaborate affair. They simply require the branches regulating, cutting out any crooked, exhausted, or crowded branches. Trees for pots may be procured and potted now.—E.

Societies.

Coming Chrysanthemum Shows.

The following fixtures are advertised:—

Birmingham, Nov. 12th	Leeds Paxton, Nov. 12th
Bolton, Nov. 15th	Rugby, Nov. 13th
Bournemouth, Nov. 13th	Scottish Horticultural, Edin-
Bradford, Nov. 15th	burgh, Nov. 15th
Brighton, Nov. 12th	Sheffield, Nov. 15th
Hull, Nov. 13th	Windsor, Nov. 8th
Leamington, Nov. 21st	York, Nov. 13th

Royal Horticultural—Scientific Committee, October 29th.

Present: Dr. M. T. Masters (in the chair); Messrs. Drury, Odell, Bennett-Poë, Worsley, Hogg, Saunders, Holmes, and Gordon; Drs. Rendle and Cooke; Revs. W. Wilks, Engleheart, and G. Henslow, Hon. Sec.

Crinum seeds.—He also exhibited some germinating seeds of *C. longifolium* from which the embryo had escaped with the exception of the tip of the cotyledon, which was absorbing the reserve food materials of the endosperm.

Sunflower proliferous.—Mr. Ballard, Colwall, Malvern, sent a remarkable flower, in which every floret consisted of a solid axis, with no ovary, the pappus scales being very numerous, and more or less of a purplish colour. Within them were several small florets, constructed in a similar manner, in having short solid axes, with numerous pappus scales. Within these the summit of the latter axes bore very minute immature scales. There was no trace of any essential organs or corollas.

Pelargonium proliferous.—Mr. Odell showed specimens of a crimson flowered "scarlet," in which secondary floral axes proceeded from the umbels associated with foliage. The peculiarity is not uncommon, but it had become a fixed habit in the plant in question.

Cypripedium scale.—Dr. Masters exhibited a specimen of stellately formed scales. Mr. Saunders undertook to examine them.

Pear-rind with grit.—Mr. Holmes exhibited some pieces of the rind of a Pear, with remarkably large callosities of "grit" just below the surface. No cause could be assigned to its formation.

Birch bark.—He also exhibited a specimen of the thin bark of *Betula Baejpootra* from India, where it is used as a writing material, the numerous papery layers being easily separated.

Vine leaves diseased.—Mr. E. Portsmouth of Herrington Hall, Sunderland, sent some leaves and fruits. He observes, "the disease is not confined to the Vines, but is growing on the timber in the house; only in the latter case it does not appear to thrive so well." Dr. Cooke undertook to examine and report upon it.

Trehalose.—Dr. Cooke showed specimens of cocoons, occurring on *Echinops Persicus*, *Fisch*. They are made by a beetle, *Larinus maculatus*, *Fald*. The cocoons contain a peculiar sugar called "Trehalose," a bitter principle, gum and starch identical with that found in the stem of *Echinops*, and earthy alkaline salts. It is found near Kirrinel in Persia (see Hanbury, "Science Papers," pp. 159-164).

Bambusheer.—Dr. Cooke exhibited specimens usually known as "Bambusheer," a secretion of silica and lime occurring in the nodes of Bamboos. It was received from Calcutta.

Portsmouth, October 29th.

In the Town Hall the fifteenth annual autumn exhibition was held, and was in every way a success. Cut blooms were a prominent feature. For forty-eight, half Japanese and the remainder incurved, there was brisk competition and a good display. Mr. G. Hall, gardener to Lady Louisa Ashburton, Melchet Court, Romsey, won the premier award with handsome Japanese and fair incurved. The best of the varieties were Japanese Mrs. Weeks, Mrs. G. Mileham, Florence Molyneux, Le Grand Dragon, General Buller, Miss A. Byron, Edwin Molyneux, Mme. Carnot, and May Vallis.

Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashtead Park, Epsom, was second with very fine incurved, but light, Japanese. In the former section, Mr. James Eadie, Pearl Palace, Duchess of Fife, C. H. Curtis, Globe d'Or, and Miss Haggas were well shown. Mr. Nobbs, gardener to His Majesty King Edward VII., Osborne House, Isle of Wight, was a good third.

Mr. Hall was also successful with two dozen Japanese distinct, staging wonderfully well Edith Dashwood, T. Carrington, Mrs. Weeks, Mrs. Barks, and Le Grand Dragon. The second prize was secured by Mr. J. Agate, Brockhampton Nurseries, Havant.

Mr. E. Brown, jun., Alma Road, Southampton, won the premier place with twenty-four Japanese in twelve varieties, with full-sized blossoms of Lord Ludlow, Edwin Molyneux, Mrs. Weeks, Miss A. Byron, Vivian Morel, and Master Seymour. The second prize was secured by Mr. G. Lambert, Chichester, Mr. White, Southsea, coming next in order of merit.

Amateurs.

Competition was very close in the classes set apart for amateurs. In the Japanese class for twelve, Mr. T. Williams,

Southsea, won the premier award with an even set. Mr. J. Love, West Cowes, a good second. For six Japanese, Mr. Crockford, Southsea, annexed the premier award with even sized flowers. Mr. C. Snook secured the leading award in the class for six bunches of Pompons, medium sized, shapely blossoms.

Chrysanthemums employed for decorative use provided an interesting feature. Especially good were the exhibits for one basket, one bouquet, and for a table decorated. Miss K. Turner annexed the leading award, Miss L. Fay second. This exhibitor also won for one basket of Chrysanthemums, a really deserving exhibit. Groups of Chrysanthemums associated with foliage plants added much to the attraction of the show. Mr. Cheator, gardener to Sir W. Pink, Shrover Hall, Cosham, was an easy first with a nicely balanced group, well furnished with Palms, Ferns, &c. Mr. Agate second. Fruit and vegetables were numerous and good. Space forbids details. Messrs. Isaac House and Sons, Westbury-on-Trym, staged an interesting exhibit of Violets, which were much admired.

Mr. N. Molyneux, Rookesbury Park, Fareham, secured a first-class certificate for Japanese Chrysanthemums, Violet Lady Beaumont, a full-sized Japanese of dwarf habit, dark crimson in colour, with a pure gold reverse, a really good acquisition.

Croydon Chrysanthemum.—October 29th and 30th.

The exhibition of Chrysanthemums held on Wednesday of last week, in the Public Halls, Croydon, was the fourteenth in succession held under the ægis of this earnest body of devotees. Until this year we had not hitherto attended the Croydon autumn show, but from what we saw and heard we were entirely satisfied that the society works well together, and they are fortunate in possessing a diligent and conscientious secretary in Mr. W. B. Beckett. The aim is constantly to include new features annually, to be prompt in paying prize money (it is, indeed, all paid before the show is concluded), and in other ways to seek encouragement and to give it.

Another point worthy of being emphasised is that the exhibition hall is cleared at the scheduled hour, a factor that greatly helps judges and everybody else to get along with their business. Fruit and vegetables, though not figuring prominently in our report, were yet fairly numerous, and of superior merit.

Challenge Cup Class.

This fine class was for eighteen cut blooms of Japanese type in distinct varieties, plus eighteen distinct incurved sorts. Four magnificent exhibits came forward, and the keenest competition was the order of things. The Challenge Cup was in the long run secured by Mr. G. T. Hunt, gardener to P. Ralli, Esq., Ashstead Park, Epsom, whose blooms of Mrs. W. Mease (premier bloom), W. R. Church, Pride of Madford, and Le Grand Dragon were as near perfection as might be. The other blooms were also good, though some were slightly lacking in finish. The varieties included Charles Longley, Mme. Gabriel Dabrie, Florence Molyneux, Mrs. J. Bryant, Mrs. Greenfield, Rev. W. Wilks, Mme. Philip Rivoire, Mrs. G. Mileham, Mr. Louis Remy, Mme. H. Rey, Princess Alice de Monaco, Mrs. J. J. Thorneycroft, Mr. T. Carrington, and Edith Dashwood. These, with the varieties previously named, comprised the eighteen Japanese.

The second prize went to Mr. F. Bible, gardener to H.R.H. Prince Hatzfeldt. The Japanese blooms were less refined than Mr. Hunt's, but of large proportions. Mrs. Coombes was represented by a bloom of enormous size and grand in every respect. Mrs. Parks was also very fine, and so, too, Vivian Morel, and M. Louis Remy. The incurved blooms were very fair, though somewhat uneven. Mr. C. J. Salter, gardener to Mrs. Haywood, Reigate, occupied the third position with blooms of bright colour and fair size and finish. His Matthew Smith, Mme. Carnot, Pride of Exmouth, and Mrs. Thos. Pockett were capital samples. The champion of last year, namely, Mr. F. King, of Holmwood, was out of the running on this occasion.

Groups.

Three prizes were offered for a group of Chrysanthemums in pots, set up in a semicircle 10ft by 5ft, and edged with foliage plants; and three groups were brought forward. The best of these was from Mr. W. Collins, gardener to R. V. Barrow, Esq., J.P., of Park Hill Road. The plants were strong, robust specimens, with abundance of dark, leathery green foliage, and massively developed blooms, particularly those of Mrs. Mease and Mme. Carnot. Mr. E. Dove, from Bickley Hall, was a close second, though his blooms were less massive; and third, Mr. E. Seymour, gardener to Samuel Taylor, Esq., Park Hill Road.

For eighteen cut Japanese blooms, in a dozen distinct varieties, Mr. E. Dove, gardener to E. Wythes, Esq., Bickley Hall, led off with a remarkably even set of blooms. Here the blooms of Mr. T. Carrington, M. Chenon de Leche, Mrs. Weeks, Australie, Phœbus, Edith Tabor, and Miss Nellie Pockett were most conspicuous. Mr. C. Payne, gardener to C. Whittington, Esq., Betchworth, followed as a good second; and Mr. L. Gooch, gardener to F. Wickham Jones, Esq., Selhurst Road, a creditable third. Six entered. In Class 5 nine entrants contested with ten cut Japanese blooms, in one or more varieties, staged with

Chrysanthemum foliage in two vases. The feature is an innovation at the Croydon Show, and proved highly encouraging. Mr. R. Gladwell, gardener to Miss Mortimer, Bensham Manor Road, secured the premier award with well grown and nicely staged blooms. Mr. L. Gooch came second, but was perceptibly inferior, even to the casual viewer; and third prize was annexed by Mr. A. Heritage, the gardener of Sidney Ellis, Esq., Ross Road, South Norwood. The whole of the sets were of a superior order.

The sixth class was devoted to the incurved varieties, which, like the Show and Fancy Dahlias, are now out of fashion, or almost so; yet we would welcome a stronger support of these smart, if somewhat formal, flowers. Only four staged the dozen distinct varieties, and here Mr. C. Payne led the way. His varieties included Chrysanthemiste Bruant, Pearl Palace, C. H. Curtis, Comtesse d'Etoile, Dome d'Or, Jeanne d'Arc, Dorothy Foster, Nellie Threlfall, Lady Isobel, Louisa Giles, and Brookleigh Gem. Mr. C. Lane, gardener to E. H. Coles, Esq., Caterham Valley, was second, and Mr. G. Prebble, gardener to Miss Thrale, of Shirley, third. For six incurved blooms, one variety, Mr. W. Leppard, Reigate, beat Mr. C. Lane; and third prize fell to Mr. G. Prebble. Six contested.

The incurved blooms were not so good on the whole. Still, there were splendid blooms of the varieties Duchess of Fife (premier bloom), Miss M. A. Haggas, Violet Tomlin, and Chas. H. Curtis, Globe d'Or, Empress of India, Louisa Giles, Mrs. E. Bennett, and Pearl Palace.

For six Japanese blooms in one variety the awards were accorded as follows: first, Mr. C. Lane, with Pride of Madford, very rich and handsome; Mr. F. Bible second, with equally fine blooms of Mr. T. Carrington; and third, Mr. J. Daniel, Holmwood, with creditable blooms of Jane Molyneux variety. There were seven entrants.

Mr. G. Lane won for nine foliage plants; Mr. F. King second; and third, Mr. G. Lewry.

Divisions I. and II.

Mr. G. Eales was first for a miscellaneous group of plants in division I., open to single-handed gardeners only; and Mr. J. Galvin, Purly, followed as second prizeman in the same class. Mr. A. Dyer was third. Each staged very tasty little groups.

This division also provided classes for flowers in vases, and blooms equalling those in the foregoing open classes were the rule. In Class 18 Mr. A. Heritage secured the honours, Mr. G. Lemon coming second, and Mr. A. Dyer third. For twelve distinct Japanese varieties Mr. A. Heritage again was first, with Mr. G. Lemon second, and Mr. A. Dyer third, all with fine collections. The order of merit in a similar class for incurved varieties was, first, Mr. G. Lemon; second, Mr. A. Dyer. Mr. G. Eales had the finest set of six bunches of Pompons, J. J. Pittman, Esq., being second, and Mr. C. Perritt third.

In division II. G. Plomer, Esq., Beechleigh Road, Streatham Common, was in the forefront for a similar "vase" entry to those in the other division; J. G. Mills, Esq., Hazel Dell, Croydon Road, Anerley, formed a good second, and third F. Latrielle, Esq., Whitworth Road, S. Norwood.

Fruit.

The display of Apples was most creditable to the Croydon men. In Class 9, for a dozen distinct varieties, Mr. W. E. Humphreys, gardener to A. H. Smee, Esq., J.P., Hackbridge, was first, he having fine dishes of Wealthy, Newton Wonder, Hoary Morning, and Peasgood's Nonesuch. Mr. Jones, gardener to J. R. Brougham, Esq., of Wallington Bridge, was an able second, though his fruits were spotted in one or two cases. Mr. F. Bible came third. A certificate of merit was awarded to Mr. O. Jeal, gardener to Nathaniel Waterall, Esq., of Waddon, for a small collection of fruit. A like certificate was presented to Mr. E. Wood, Salhurst, for a collection of Gourds; and to Mr. John Kachler for honey. Mr. W. Taylor, Forest Hill, was first for two bunches of black Grapes, showy, well finished samples of Appley Towers; Mr. A. Ratcliffe was second with heavier bunches; and Mr. F. Bible third. White Grapes ditto, first, Mr. W. Lintott, Marden Park Gardens, with Muscat of Alexandria; second, Mr. Taylor, with the same; and third, Mr. C. Blurton, Kingswood, Epsom. All of these were very green.

Kent County Chrysanthemum and Horticultural, Oct. 31, Nov. 1.

A very interesting show was held by the above society in The Rink, Blackheath, a borough only a few miles from London. Messrs. J. Veitch and Sons sent a beautiful group of stove flowering and foliage plants, which occupied a quarter the length of one of the sides of the hall. Mr. H. J. Jones, from Ryecroft Nursery, Lewisham, S.E., was forward with Chrysanthemums and foliage plants, and Mr. A. W. Hollands, of Lee Park Nursery, had also a minor group. Besides the flowers, there were a few classes for fruit and vegetables.

Mr. A. W. Hollands won the premier award in class I for a group of Chrysanthemums effectively disposed. Mr. E. Dove, of Bickley Hall, followed second; and Mr. J. Robins, Eltham Lodge,

third. The groups were far too confined to be beautiful, and rather than make a mere farce of this phase of the exhibition, the committee would do well to leave the class from the schedule. In class 3, for two dozen distinct Japanese varieties, Mr. E. Dove again came to the front, having very fair samples of Edith Tabor, Mrs. Weeks, Mrs. Coombes, and Vivian Morel. The same exhibitor was in the forefront in class 4 for a dozen of the same; and Mr. J. Lyne, of Foxbury, Chislehurst, followed second; the third award fell to Mr. E. J. Booker, The Bignores, Dartford, with much smaller blooms. Mr. E. Trebble had the premier set of a dozen incurved blooms, second and third prizes going respectively to Mr. E. J. Booker and Mr. J. Lyne.

There were only two exhibitors in the class for thirty-six incurved blooms, and here Mr. C. Payne beat Mr. E. Dove. The latter had a most miserable set, and exceedingly uneven. The best of Mr. Payne's blooms were Pearl Palace, Jeanne d'Arc, Louisa Giles, Comtesse d'Elville, and Chas. H. Curtis. Mr. H. Jackson had one of the finest exhibits of twelve varieties of Pompons we have seen this season, and most deservedly won first honours. For six incurved blooms of one variety, Mr. E. Trebble, Shirley Hurst, Shirley, led with Baron Hirsch, while for a similar entry of Japanese blooms the award was annexed by Mr. E. J. Booker with Mrs. H. Weeks. There were six entrants in class 20 with a dozen distinct Japs. The class was confined to growers around Blackheath. Mr. D. Judge, of Buckdale Gardens, Eltham, had a remarkably fine and creditable twelve, and staged better samples of Henry Stowe, Mrs. Greenfield, Mrs. G. Mileham, Edith Tabor, and Mr. J. C. Neville than was elsewhere to be seen in the show. The second prize was annexed by Mr. J. A. Baker, who had blooms less meritorious in nearly all points. The only collection of twelve incurved blooms came from Mr. S. E. Cauldrey, jun., Woodstock, Grove Park, Lee, S.E.

Mr. J. Lyne beat Mr. E. Dove in a class for a group of flowering and foliage plants covering 40 superficial feet. He had well grown plants of Begonia Gloire de Lorraine, Clerodendron fallax, Cattleya labiata, C. Bowringiana, Crotons, and other subjects.

Fruit and Vegetables.

The best collection of twelve kinds of vegetables was that put up by Mr. J. Lyne, though the size of them was small. Mr. G. Fisher, from Lee, and Mr. W. Musson, from Lewisham, came second and third respectively. Four collections were staged.

Mr. Lyne beat Mr. W. Taylor for two bunches of black Grapes. The latter staged the only exhibit of white Grapes. Apples were fairly well shown. For four dishes of dessert Apples Mr. H. Jackson, of Bradfield, Keston, Kent, was first, having neat dishfuls of Mabbot's Pearmain, King of Pippins, Cox's Orange, and Blenheim. The second prize was awarded to Mr. J. A. Baker with fine King Pippins. For dishes of dessert Pears Mr. Jackson was again placed foremost with Beurré Clairgeau, Duchesse d'Angoulême, Pitmaston Duchess, and Beurré Diel. Mr. G. C. Farmer, Leeds Abbey, Maidstone, was a very close second, and staged splendid samples of Pitmaston Duchess; Mr. J. Lyne followed for third. Mr. Farmer was leader in class 39, for four dishes of cooking Apples, with Mr. J. Lyne as second.

Special Awards.

Mr. E. Dove won a special prize given for the best Japanese bloom in the show, he having *Australie*, and Mr. C. Payne won similarly in the incurved section with *C. H. Curtis*. Silver-gilt medals were awarded to Messrs. Veitch, Limited, and H. J. Jones.

Battersea, Clapham, and Wandsworth, Nov. 1st and 2nd.

Catering for, and supported as it is by the numerous devotees of the Chrysanthemum in the somewhat densely populated suburbs of the great metropolis whose names are given above, this society yearly holds an autumn exhibition within the Town Hall, situated on Lavender Hill, Battersea. That held last Friday and Saturday was up to the usual in merit, but we would be greatly pleased to see further endeavours made by the committee to incite exhibitors to stage more effective groups, both of miscellaneous plants and Chrysanthemums. Let them look at the styles adopted by the foremost nurserymen and gardeners at such shows as is held this week in the Aquarium, and then make the endeavour to pattern, or cause others to pattern, after these most advanced methods. The general quality of the show was creditable, and in such a collection as was staged by Mr. Alexander Smith, the quality was of very superior excellence indeed. He had the premier bloom in his set of eighteen Japanese varieties. There are thirty-five classes, in a couple of divisions, and embracing classes for florists, gardeners, and amateurs. A summary report follows.

SHOWER BOUQUET.—Messrs. Harwood Brothers, Balham Nursery, staged the only presentation, and this was a very finely arranged selection of *Cattleya labiata*, *Oncidium flexuosum*, *Lily of the Valley*, *Croton leaves*, and *Asparagus*.

GROUPS.—For a group of thirty-six plants, the first prize was annexed by Mr. Fred Wilkie, 75, Tay Bridge Road, Battersea, and Mr. W. G. Barrett, 15, Corunna Road, was second. The

first award for a group of two dozen Chrysanthemums fell to Mr. W. T. Stringer, of 67, Tay Bridge Road. The groups were staged on platforms, and so failed to produce any fine effect. Mr. Henry Boswell, gardener to P. Purnell, Esq., Woodlands, Streatham Hill, led the way in competition with a group of miscellaneous foliage and flowering plants. The second place was filled by Mr. J. Hudd, gardener to F. Price, Esq., St. Lawrence, Clapham Common, Begonias, Celosias, Primula obconica, and Roman Hyacinths were used in both cases, together with the usual foliage plants. Messrs. Wood Bros., of High Road, Balham, staged a non-competitive display of Palms and other plants.

CUT BLOOMS.—In the class for eighteen Japanese, in a dozen distinct varieties, the premier award became the property of Mr. Alex. Smith, Convent Gardens, Roehampton, whose blooms were very large and handsome. The varieties included Mrs. H. Weeks, (premier Japanese in the show), Chas. Davis, Mme. Von Andre, Lady Hanham, Mme. G. Henri, Mr. T. Carrington, Mrs. Mease, Mrs. G. Palmer, Oceana, Australie, Mme. Carnot, Pride of Madford, Surpasse Amiral, Eva Knowles, Mrs. H. Weeks, Vivian Morel, Le Grand Dragon, and H. Weeks. The second prize was taken by Mr. John French, gardener to Mrs. Barclay, Ambleside, Wimbledon Park, with much smaller blooms. Mr. A. Smith was again winner for the dozen Japanese in eight distinct kinds, his best here being Vivian Morel and Australie. Other prize-winners in the competitions which followed were Messrs. A. Hurst, of 15, Streatham Hill; W. A. Underwood, Chipstead, Surrey; J. Hudd, St. Lawrence, Clapham; A. H. Matchin, Upper Tulse Hill; C. J. Ninnies, New Wandsworth; W. Forth, Wandsworth; W. R. McLellan, Lavender Hill; J. J. Green, F. Duke, and Mr. A. B. Freeman. For six bunches of Pompons Mr. W. J. Stringer was first.

MISCELLANEOUS EXHIBITS.—Messrs. W. Wells and Co., Limited, Earlswood Nurseries, Redhill, Surrey, had massive blooms of the following: Mrs. J. Clewe, Matthew Smith, Phyllis, Mrs. T. W. Pockett, Ben Wells, J. Humphries, Marquis V. Venosta, Mrs. A. McKinley, Mme. Herrewége, Lord Ludlow, Mrs. C. J. Salter, and Calvat's Sun, all of them new sorts.

Mr. Robert Neal, of Trinity Road, Wandsworth Common, had a group of fine-foliage and flowering plants.

From Messrs. Isaac House and Son, Westbury-on-Trym, Bristol, came a small but tasteful display of Violets.

Mr. E. H. Winnett, 16, Edna Street, Battersea, set up a small collection of Cacti in 3in and 4in pots.

The Ichthemio Guano Co. were also forward with samples of their specialities.

National Chrysanthemum, November 5th, 6th, and 7th.

The great autumn competition and fête of the National, the big brother to all other Chrysanthemum societies, was held on Tuesday and the two following days of this week. It was a huge success. Class 1 furnishes a great floral display of growing plants in pots, together with cut blooms, and the addition of suitable foliage plants and appropriate cut foliage. The handsome prizes of £15, £10, £8, £6 are offered. As usual, the "Trophy" class, as it is termed, occupies a prominent place in the schedule. Even its most ardent admirer, however, cannot claim for this class a great success. Certainly the quality of the blooms displayed are not equal to the value of the prize. For a Chrysanthemum society it is an easy class to fill. Forty-eight blooms distinct, half to be Japanese and the remainder incurved, are required. The blooms may be contributed by as many as forty-eight cultivators, if each is a member of the society, these entering for the prize; or one person may compete alone. The Holmes Memorial Cups are as usual offered, and these invariably bring keen competition and excellent flowers, although that for Japanese blooms has lost some of its interest owing to the better quality of this section flowers going into the vase class.

£10 and the Challenge Cup (to be held for a year) is the first prize for thirty-six incurved blooms, distinct; similar conditions apply to the class for forty-eight Japanese blooms. By far the most interesting class of all is that known as the "Vase" class, £20, £15, £10, £5 being offered here in separate prizes for twelve Japanese blooms distinct, five blooms of each, in one vase, Chrysanthemum foliage added. In this class a magnificent display is annually made. Numerous and valuable prizes are offered in many of the remaining classes. Special prizes are offered by Messrs. Wood and Son, Limited; G. H. Richards, J. T. Simpson (Brixton), Percy Waterer, and vegetable competitions are encouraged by Messrs. Webb and Sons and Robert Sydenham.

Mr. Richard Dean, V.M.H.

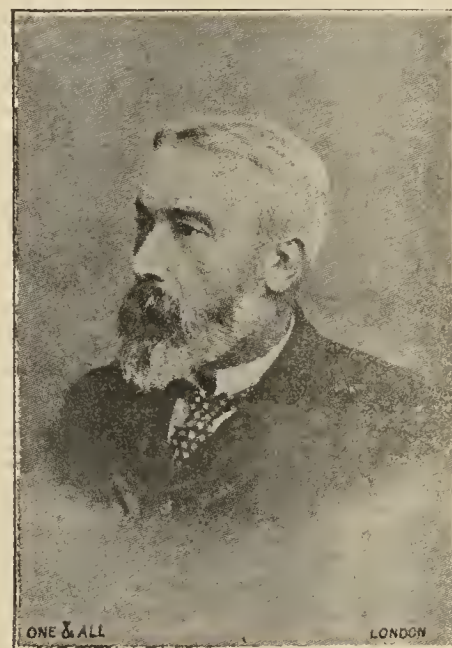
On this occasion we take the opportunity of reproducing a portrait of Mr. Richard Dean, who has worked so very ably, and with so much of general satisfaction, as secretary to the National Chrysanthemum Society for many years. His advanced age (over seventy) makes the work now very arduous, yet the old fire is hard to quench, and, indeed, Mr. Dean told us a few days ago that the greatest anxiety he had experienced for a long time was during a recent indisposition, when he was compelled to

relinquish all work and take to bed. As mentioned by us ten days ago, a number of gentlemen who recognise the grand work of the veteran have joined for the purpose of presenting a testimonial to Mr. Dean. Subscriptions toward a suitable memorial are invited to be sent to Mr. N. N. Sherwood, at 152, Houndsditch, London, E.C.

As an instance of the honorary work he has undertaken, we need only instance the enormous labour in connection with the Sweet Pea Bi-centenary Celebration of last year, which Mr. Dean undertook without fee or reward, and which has only just been completed.

"Since 1857, when, on the death of Mr. John Edwards, Mr. Dean accepted the position of Hon. Secretary of the National Floricultural Society, he has been a leading worker in nearly every horticultural movement. In 1866, his services as assistant to the secretaries for the Great International Exhibition, when a very large share of the work fell to him, were much appreciated. It is also worth recalling that he was Hon. Secretary of the two Hailstorm Relief Funds of 1876 and 1879, which were instrumental in doing a world of good to many small growers who suffered by the storms. He was also Secretary of the Postal Reform Committee, of which the late Mr. Alfred Sutton was chairman. This committee did much to hasten the adoption, first of the sample post, and, latterly, of the parcel post, which is now so great a boon to all nurserymen and seedsmen.

"As one of the original founders of the Royal Gardeners'



MR. R. DEAN V.M.H., SEC. N.C.S.

Orphan Fund, and a member of its committee from the first until the close of last year, he has shown a warm interest in all charitable organisations connected with the gardening profession. As a popular writer on matters pertaining to the garden, and as an acknowledged authority on Florists' Flowers, and a judge at horticultural exhibitions, Mr. Dean has a wide reputation."

Most of the foregoing particulars are contained in the circular letter sent out by the committee of the Testimonial proposal. We are indebted to the Editor of the "Agricultural Economist" for the use of the portrait block on this page.

Fountain Groups.

Mr. Norman Davis, Framfield, Sussex, was far and away the leading exhibitor in class 1, for a floral display consisting of Chrysanthemums in pots and as cut flowers, together with foliage plants. His blooms were most distinctly fresh and handsome, and furthermore were enhanced to the utmost by the admirable taste and skill displayed in the arranging of them. Foliage plants were used with cut blooms and a large number of pot plants. His Mrs. Mease and Madame Carnot blooms were as fine as ever, and with these he had a number of grand samples of the leading newer varieties, both exhibition and decorative sorts. Mr. E. J. Dove, of Bickley Hall Gardens, Kent, formed a most creditable second, a position he should be, and no doubt is, very proud to be in. His group was rich and bright, being well finished off. The third award went to Mr. James Lock, Oatlands Lodge, Weybridge, whose arrangement with rustic work seemed somewhat ill done, and hid out the centre of the group. The fourth prize fell to Mr. J. Spink, of Summit Road Nursery, Walthamstow.

Open Classes.—Plants.

In class 2, for six bush specimens, large flowered varieties, Mr. W. Mease had the only exhibit, but these were highly creditable. The competition for specimen pot plants was poor, though the plants brought forward by the few who entered the lists ran

each other closely. For three trained specimens, Mr. G. Whitehorn, gardener to S. Nicholls, Esq., Oak Hall, Buckhurst Hill, beat Mr. F. E. Wraight, gardener to Miss Troup, Essex Lodge, Upper Clapton, N.E., each with superbly fine plants. For three standard trained plants, large flowered, Mr. Wraight alone entered. His plants were smothered with blooms, and stood about 3½ ft high. For a single specimen Mr. Wraight also won, the second place being filled by Mr. G. Whitehorn. For four specimens of pompons, Mr. F. Gilks, gardener at Bylock Hall, Ponders End, was a most creditable winner, the second falling to Mr. Wraight, and third to Mr. F. Gilbert, Kendal House, Blackheath Park, S.E. The latter had remarkably fine plants.

Open Classes.—Cut Blooms.

This fine class produced a number of grand collections from various societies, the winners for first and second being new to Aquarium records. The class was for forty-eight blooms, to include twenty-four incurved, distinct, and twenty-four Japanese. A Challenge Trophy and £10 are offered as a premier award. The shield this year was annexed by the Cardiff and District Chrysanthemum Society, with magnificent Japanese blooms. There were staged large and finely formed blooms of the new W. R. Church, grand also in point of colour; Australie, Lord Salisbury, C. Davis, Madame G. Henri, Graphie (a picture), J. McKellar, M. Chenon de Leche, Mrs. Barkley, and G. J. Warren. The pick of the incurved blooms includes Countess of Warwick, Ernest Cannell, V. Foster, Mrs. H. J. Jones, Topaze Orientale, Ialane, Ma Perfection, Globe d'Or, Emily Ills, Mrs. W. Howe, and Lady Isobel. The blooms were contributed by Mr. G. W. Drake, 44, Cathays Terrace, Cardiff. The second award was secured by the Epsom and District Chrysanthemum Society, with flowers sent by Mr. W. Higgs and Mr. G. Hunt. The blooms were all very fine, especially one of Mrs. Mease and another of Duchess of Fife, in the incurved section. Third came the Winchester Horticultural Society (Mr. W. Neville, of Cornstiles, Twyford, contributing). The blooms of Beauty of Teignmouth, General Buller, Snowdrift, Lord Ludlow, Miss E. Douglas, Lionel Humphreys, and Mrs. W. Popham were especially well developed.

Mr. A. W. Seabrook, Ellerslie, Buckhurst Hill, led for a dozen incurved blooms, followed by Mr. C. H. Martin, Raymead, Hendon, and third Mr. George A. King, Summerlee, East Finchley. Mr. F. Searles, Ringley Hill, Reigate, was foremost for the half-dozen, he having a splendid bloom of C. H. Curtis; Mr. W. Leppard, of Oakdene, Reigate, second; and Mr. F. Bush, Rose Hill, Totteridge, third. For half-a-dozen blooms in one variety, Mr. Joseph Childs, The Priory, Totteridge, led with C. H. Curtis; Mr. W. Leppard second, with good blooms of Baron Hirsch; and Mr. C. H. Martin third, with poor Duchess of Fife. On the whole the incurved blooms were sweet and creditable.

Holmes' Memorial Challenge Cups.

Mr. Higg's first prize set of thirty-six incurved blooms were up to the old traditions, and finer blooms of this section have not been seen. He staged Lady Isobel (the premier incurved bloom in the show, winning for him a special prize of one guinea), Nellie Southam, Frank Hammond, Mrs. H. J. Jones, Madame Durandal, Hanwell Glory, Ma Perfection, Globe d'Or, Topaze Orientale, Ialine, Duchess of Fife, Chrysanthemum Bruant. Second row: Charles Curtis, Egyptian, King of the Yellows, Dorothy Foster, J. Agate, Lydia, Mrs. R. C. Kingston, Louisa Giles, Countess of Warwick, Ralph Hatton, Yvonne Desblane, and Robert Petfield. Third row: Thomas Lockie, Creole, Empress of India, J. Lambert, Madame Vernieul, Henry Ellis, Pearl Palace, Mrs. W. Howe, Queen of England, M.D. Lebusquette, Triomphe d'Eve, and Mr. E. Bennett. Yes, Fetcham Park did itself honour. The second prize fell to Mr. G. J. Hunt, Ashstead Park, Epsom, with handsome samples of Duchess of Fife, Miss M. A. Haggis, Bonnie Dundee (very rich), Golden Empress, and Mrs. W. Howe. The third place was filled by Mr. W. Mease, with handsome blooms of Lady Isobel, Madame D. Vernieul, Topaze Orientale, and Miss Annie Hills; fourth, Mr. Frank Bible.

The handsome prize of £10 and a Challenge Cup, as mentioned in our introduction, is awarded in class 10 as first prize for forty-eight distinct Japanese blooms. There were seven fine collections set up, the first prize falling to Mr. F. S. Vallis, of Bromham, Chippenham. His blooms were superb, and timed to the day. In the front row he had Madame Herrewidge, Marquis V. Venosta, Edwin Molyneux, G. J. Warren, Mrs. J. Bryant, J. Lewis, Phœbus, Australie, Seedling, Madame P. Radilli, Madame Carnot, Lord Salisbury, C. J. Salter, Mr. T. Carrington, and Mrs. Mease. Second row: Charles Longley, Le Grand Dragon, Florence Molyneux, W. R. Church, Mrs. B. Wilde, Calvat's '99, Seedling, Matthew Smith, M. P. Rivoire, M. Chenon de Leche, Philip Raynor, Lord Ludlow, Mrs. G. Mileham, J. J. Thorneycroft, Australian Gold, and Mrs. Barkley, an especially good bloom. Third row: Mrs. H. Weeks, Seedling, Miss E. Douglas, M. L. Remy, Mutual Friend, H. Weeks, Alice Byron, Mrs. Coombes, Millicent Richardson, Pride of Exmouth, Lily Mount-

ford, Henry Stowe, Pride of Madford, Mons. Hoste, and Nellie Pockett. Mr. George W. Drake, 44, Cathays Terrace, Cardiff, came second with much less massive blooms and wanting in finish compared with the first set. His bloom of E. Molyneux was as fine as any in the show. M. Chenon de Leche was also grand, as were Vivian Morel, Madame Carnot, W. R. Church, and Lord Salisbury. The third prize fell to Mr. W. Mease, with blooms not quite at their best, but promising very well. There were good blooms of Australie, J. R. Upton, C. Davis, Matthew Smith, Mrs. G. Carpenter, Lord Salisbury, Mr. T. Carrington, and others. A couple of sunny days would have shown a difference on this set. Fourth came Mr. W. Meredith, gardener to George Wilder, Esq., Stanstead Park, Emsworth, Sussex, with splendid blooms, and ably backing the third prizewinner.

Great Vase Class.

No doubt the chief attraction of the show continues centred in the great vase class, and the interest and competition on this occasion was as keen as ever, eight competitors facing the judges, and the only word describing the class was magnificent. The winner once more proved to be Mr. F. S. Vallis, Bromham Fruit Co., Limited, Chippenham, who had a better collection than last year. The blooms almost defied description. Reading from left to right the vases were: Mrs. Barkley, Madame Carnot, M. Louis Remy, Nellie Pockett, Mr. T. Carrington, Mrs. J. Lewis, M. Chenon de Leche, Australie, Le Grand Dragon, Calvat '99, Edwin Molyneux, and Mrs. Mease.

Mr. Charles Beckett, gardener to Sir W. G. Pearce, Bart., Chilton Lodge, Hungerford, was second with a first-rate display. The varieties employed were: Nellie Pockett, L. Humphrey, Mrs. Weeks, Lady Hanham, Madame Carnot, J. R. Upton, Mrs. Coombes, The Princess, Mrs. Barkley, Mrs. Mease, Mr. T. Carrington, and Miss Alice Byron. Mr. W. Meredith, gardener to G. Wilder, Esq., Stanstead Park, Emsworth, was third, with good examples of Florence Molyneux, Lord Ludlow, Lord Salisbury, Calvat '99, Mrs. Barkley, and Mrs. Mease; while Mr. Silas Cole, gardener to the Right Hon. Earl Spencer, Althorp Park, Northampton, made a good fourth with fine vases of Mrs. Barkley, Mr. T. Carrington, Mrs. W. Mease, and Lord Ludlow.

The class for twenty-four Japanese, distinct, brought out nine competitors, and was an unusually strong class, the first prize falling to Mr. A. Jefferies, gardener to J. Balfour, Esq., Moor Hall, Harlow, Essex, who staged a wonderful stand. His varieties were:—Back row: Lord Ludlow, Australie, Pride of Exmouth, Silver Queen, Madame Von André, Mrs. G. W. Palmer, Madame Carnot, and J. R. Upton. Second row: Mrs. J. Bryant, Florence Molyneux, Lord Brassey, Miss Alice Byron, Mrs. Barkley, M. Louis Remy, Mrs. T. A. Compton, and Lady Hanham. Third row: Madame Gustave Henry, Edith Tabor, Graphie, Australian Gold, M. Chenon de Leche, Nellie Pockett, Lily Mountford, and E. Molyneux. Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead was second—and a good second, too. His best flowers were J. R. Upton, Mrs. Mease, G. Carpenter, Lady Hanham, Miss Alice Byron, Mr. T. Carrington, and Chas. Davis. Mr. J. W. Roberts, gardener to G. T. Skilbeck, Esq., Harrow Weald, came third with good blooms of Emily Towers, Mrs. Barkley, Australie, Lily Mountford, and Mrs. G. Mileham; and Mr. W. J. Godfrey, Exmouth, fourth.

In the class for twelve blooms, distinct, Japanese, there were thirteen competitors, who made a fine display. The first winner proved to be Mr. W. L. Bastin, gardener to A. Henderson, Esq., M.P., Buscot Park, Faringdon, for a grand board. His varieties were Mrs. Mease, Mr. T. Carrington, Madame Carnot, Mrs. White Popham, Vivian Morel, Simplicity, Mrs. Coombes, Lord Ludlow, Lord Salisbury, Mrs. Barkley, Mr. H. Weeks, and Mrs. J. Lewis. Mr. A. Jefferies was a good second, his best blooms being Lord Ludlow, Mrs. Barkley, E. Molyneux, Lily Mountford, Le Grand Dragon, and Australie. Mr. W. J. Godfrey was third, staging really good blooms of Godfrey's Pride, Mafeking Hero, Kimberley, Sensation, and Masterpiece; while Mr. G. H. Clack came in fourth.

Strange to relate, there were only two competitors in the class for a single vase of six Japanese blooms, one variety. Mr. S. Foster, gardener to R. Nivison, Esq., Tenderden Hall, Hendon, who staged Mrs. J. Lewis in good form, was first; while Mr. W. Cotterell, gardener to Mrs. Guy Paget, Oxon Heath, Tonbridge, was second with Madame Carnot. A similar class for yellows brought out six vases, Mr. A. Jefferies winning handsomely with Edith Tabor, Mr. W. L. Bastin coming second with Mrs. W. Mease, Mr. W. J. Godfrey third with Kimberley, and Mr. S. Foster fourth with Phœbus. For a vase of any other colour there were twelve entries—a grand display, too. Mr. A. Jefferies was placed in the premier position with M. Chenon de Leche, of good colour; Mr. W. G. Prudden-Clark, Hitchin, was second with Mrs. Barkley; Mr. W. J. Godfrey was third; and Mr. Mark Rayment, gardener to W. Beech, Esq., Romford, fourth with Mrs. Coombes. Four competitors staged in the class for one vase of six blooms, hairy petalled varieties. The first prize went to Mr. H. Love, 1, Melville Terrace, Sandown, Isle of Wight, who had a good vase of Beauty of Truro and Princess

Henry, the latter a splendid variety; the second to Mr. J. Cillingham, gardener to H. Harmsworth, Esq., North End Place, Hampstead Heath; and the third to Mr. W. G. Prudden-Clark, for mixed varieties.

Special Prizes.

The class for six vases of five blooms each was filled by three competitors. Mr. W. Higgs secured premier honours for a splendid exhibit, the varieties being Louisa Giles, Ma Perfection, Hanwell Glory, Lady Isobel (grand), Globe d'Or, and Duchess of Fife; Mr. G. J. Hunt, gardener to P. Ralli, Esq., Ashted Park, Epsom, being second with good vases of Mrs. W. Egan, Chas. H. Curtis, and Duchess of Fife; while Mr. F. Bible made a good third.

For twelve incurved blooms, distinct, Mr. W. Higgs was again placed first in a competition of six entries. His blooms were clean, large, and well finished, the varieties being Lady Isobel, Frank Hammond, Duchess of Fife, Chrysanthemiste Bruant, Hanwell Glory, Mrs. H. J. Jones, Lydia, Ma Perfection, J. Agate, Ialene, Chas. H. Curtis, and Globe d'Or. Mr. W. L. Bastin was second with good blooms of Lady Isobel, Duchess of Fife, Hanwell Glory, J. Agate, and Mrs. Harvey. Mr. A. Sturt, gardener to N. L. Cohen, Esq., Round Oak, Englefield Green, was third; Mr. A. Jones, gardener to Miss Wyburn, Hadley Manor, Barnet, fourth; and Mr. J. W. Simmons, Wanstead, fifth.

In the class for six blooms, one variety only, there were six boards staged, but here once more Mr. W. Higgs proved invincible, taking first prize with a grand half-dozen of Duchess of Fife; Mr. W. L. Bastin coming next with well-built blooms of Topaze Orientale; while Mr. E. Coleman brought up the rear. The prize for the best incurved bloom in the show was awarded to Mr. W. Higgs for a perfect bloom of Lady Isobel.

The reflexed class for twelve blooms was poorly represented by four exhibitors only. Mr. T. Caryer, gardener to A. G. Merssner, Esq., Aldenholme, Weybridge, was first for a good level board. The varieties represented were Miss Florence Lunn, Golden Christine, King of Crimson, Mrs. Forsyth, Pink Christine, Miss A. Robertson, Phidius, Peach Christine, Cloth of Gold, and Cullingfordi; while Mr. G. W. Forbes, gardener to Madame Nicol, Regent House, Surbiton, was second with good blooms of Crimson King, The Transvaal, Amy Furze, and Chas. Tutt; and Mr. J. Barrance, gardener to G. W. Taylor, Esq., Hadley Bourne, Barnet, third.

Anemones and Pompons.

There was a similar number of entries staged in the class for twelve large flowered Anemone varieties, in which the Japanese were also included. Here Mr. W. Ring, gardener to J. Warren, Esq., Capel House, Waltham Cross, came first with a beautiful board. His varieties were Mrs. P. R. Dunn, W. W. Astor, Owen's Perfection, Junon, Empress, Marcia Jones, John Bunyan, Lady Margaret, Miss A. Love, Mdle. Cabrol, Rouche de Abondaux, and Gladys Spaulding. Mr. A. Page, gardener to G. W. Kilver, Esq., Ravenscroft, Moss Hall Grove, Finchley, was second, having Descartes, Empress, Mrs. Judge Benedict, and Delaware good. The third winner could not be found.

A class was provided for twelve blooms Anemones, distinct, to be shown in two vases, but only three exhibitors responded. Mr. Ring was to the fore once more, with a good dozen blooms, followed by Mr. C. Brown, gardener to R. Henty, Esq., Langley House, Abbots Langley, and Mr. A. Page, in the order named.

A class for the Japanese Anemones under the same conditions as the last class called forth four competitors, but still left Mr. W. Ring in the first position, his blooms being really good, Mr. J. Barrance following, and Mr. A. Page bringing up the rear. Pompons were poorly represented so far as numbers are concerned, though those staged were remarkably good. For nine varieties of six blooms each, staged in vases, there were two exhibitors, Mr. T. Caryer winning premier honours. The varieties were Perle des Beauties, William Westlake, Rubra Perfection, Mr. Holmes, Osiris, Prince of Orange, Toussaint Marizot, Madame Marthe, and Mdle. Elise Dordan. Mr. A. Page was a capital second with good vases of W. Kennedy, Pygmalion, and Prince of Orange.

The class for six varieties Anemone Pompons, six blooms each, arranged in vases, only brought out three exhibits, Mr. C. Brown winning first with Magenta King, Mr. Aste, Miss Nightingale, Madame Montels, Bessie Flight, and Antonius; while Mr. J. Maule was second with good vases of Miss Nightingale and Mr. Aste. There was a good entry of six in the class for six single varieties of six blooms each, shown in vases, Mr. W. Aldridge, gardener to L. Lacey, Esq., Palmer's Green, carrying off first prize with a capital exhibit. The varieties were Elsie Neville, Earlswood Glory, Edith Pagram, Admiral Sir F. Symonds, Rev. W. E. Renfrey, and Rose Pink; while Mr. A. Dear, gardener to W. Jordan, Esq., was a good second, his best being G. W. Forbes, Rose Pink, and Earlswood Glory; Mr. G. W. Forbes, third.

Amateurs' Division.

Mr. David Ager, Down House, Reading, led for the eighteen Japs, distinct, and a happy selection he produced. All the leading varieties were on view. Mr. E. H. Martin came second, and Mr. A. Page, Ravenscroft Gardens, Moor Hall Grove, Finchley, third. Mr. Ager also won first for the half-dozen, Mr. C. H. Martin second, and Mr. A. Page third. Mr. D. Ager had it his own way in class 36 for a dozen Japs, he staging superb blooms of Australie, Mrs. Mease, and Miss E. Pilkington. Mr. L. Gooch, Frocester Lodge, South Norwood, came second with an even set, and third Mr. F. Searles, of Ringley Hill, Reigate. There were eight collections.

The class for Mr. Percy Waterer's Challenge Cup, for the best display of decorative Chrysanthemums arranged on a table, brought out only one exhibitor, Mrs. A. Taylor, 5, Vernon Terrace, East Finchley, who was awarded the second prize for a poor display. Why is this most valuable class so neglected? and where are our market growers? For a similar class, to be judged for their decorative value with any suitable foliage, brought out the same exhibitor, who was again awarded second place, but there was nothing to demonstrate the value of this flower for decoration, a most disappointing class.

There were six competitors in the class for eighteen Japanese blooms, distinct. Here Mr. H. A. Allen, 3, Kymin Terrace, Penarth, was placed first with a strong board, his varieties being Matthew Smith, W. R. Church, Mons. Hoste, Australie, Nellie Pockett, Mons. C. de Leche, Mrs. Coombes, Max G. Bruant, Mr. T. Carrington, Miss A. Byron, Mrs. Barkley, Edith Tabor, Mrs. H. Weeks, Pride of Madford, Lady Hanham, Lord Ludlow, Mrs. G. W. Palmer, and Madame Gabriel Debie. Mr. A. R. Knight, 63, Hardinge Road, Ashford, was second, his best blooms being Mr. T. Carrington, Mrs. G. W. Palmer, Mrs. Barkley, Mrs. C. N. Payne, Mrs. Coombes, and Sydney Brunning; while Mr. Martin Silsbury, Providence, Shanklin, Isle of Wight, was a good third.

The competition for twelve varieties was evidently popular, no less than fourteen boards being arranged, the premier board being from Mr. Edward Ogden, High Street, March, who was very strong. The varieties were: Miss Elsie Fulton, Mrs. G. Mileham, Mrs. W. Mease, Australie, M. Chenon de Leche, Elsie Brown, Sir H. Kitchener, Edith Tabor, Lily Mountford, Jane Molyneux, Hon. W. F. D. Smith, and Emily Towers. Mr. T. Sharpe, 1, Railway Terrace, Stone, Kent, made a good second, the best flowers being Mrs. Barkley, Nellie Pockett, Royal Standard, and Mr. A. Barratt; and Mr. W. Gooding, Four Elms, Edenbridge, was third.

The class for six Japanese blooms, distinct, was keenly contested by fifteen competitors, Mr. H. A. Allen being first with excellent blooms of Matthew Smith, Edith Tabor, Mons. Hoste, Nellie Pockett, Mons. Chenon de Leche, and Mrs. Barkley. Mr. W. Gooding was second, with fine blooms of Mrs. G. W. Palmer and Phœbus; while the third place fell to Mr. J. G. Mills, 161, Croydon Road, Anerley.

For three varieties two blooms each, nine exhibitors staged. Again Mr. H. A. Allen was first with a powerful board, the varieties being W. R. Church, Matthew Smith, Nellie Pockett. Mr. T. Sharpe was second with splendid blooms of Nellie Pockett, and Mr. W. Gooding third.

The incurved varieties were not so strong in this section. The class for twelve blooms, not less than six varieties, was represented by three competitors, Mr. T. Sharpe coming in first with a medium exhibit, in which Duchess of Fife, Charles H. Curtis, Mr. W. Howe, and Topaze Orientale were most conspicuous. Mr. W. G. Prudden-Clark followed second, and Mr. R. J. Jolliffe, Fern Bank, Bonchurch, Isle of Wight, made a good third.

For six blooms, three varieties or more, seemed more popular with the amateurs, for there were ten boards staged. Mr. J. G. Mills, who put up good flowers of Countess of Warwick, Charles H. Curtis, Topaze Orientale, and Mrs. R. C. Kingston, came first, and Mr. T. Sharpe came second, and Mr. Edward Jones, 51, Bower Street, Bedford, third.

For six blooms, incurved, in three varieties, Mr. T. Sharpe secured first position, with Ma Perfection, Hanwell Glory, and Mrs. J. Eady. Mr. J. R. Wildman, Clapham Park, was a close second, and Mr. R. J. Jolliffe was third. There were only two boxes of pompons staged, six varieties, in sprays. Here Mr. E. E. Horsey, Goffs Oak, Cheshunt, came first with a nice stand, followed by Mr. J. A. Horril at a respectful distance.

Vegetables.

There are always a fine display of these at the shows held here by the N.C.S., and the present was no exception to the rule. The keenness of the competition may be judged from the fact that in class 67, for prizes of 6s., 5s., 4s., 3s., and 2s. offered by Mr. Robert Sydenham, there were ten entries; this was for three Cauliflowers. Mr. R. Lye, gardener to Mrs. Kingsmill, Symonton Court, Newbury, was first with fine, even heads of a white colour. Mr. R. A. Horsford, Old Chirk Castle Gardens,

Ruabon, came second, and third Mr. Silas Cole, gardener to Earl Spencer, K.G., Althorp Park, Northampton, with exceedingly massive heads. Evidently quality and not quantity was the factor noted by the judges. For three heads of Savoy Cabbages there were ten sets staged, and here the first award went to Berkhamstead, taken there by Mr. A. G. Gentle, gardener to Mrs. Denison, of Little Gaddesden. Mr. C. Brown, Langley House, Abbots Langley, was a capital second, and third Mr. A. Basile, of Weybridge. Nine entered for the three heads of Red Cabbage. Mr. A. Reid, Bretby Park, Burton-on-Trent, was first; Mr. A. G. Gentle, second; and Mr. C. Brown, third; the first being a long way in advance. Nine also staged six sticks each of Celery, and the marvellous half-dozen—so far as size goes—brought forward by Mr. Gentle, won him the first prize. They seemed much too large and coarse. Mr. S. Cole, came second; Mr. C. Osman, South Metropolitan District Schools, Sutton, Surrey, third; and Mr. J. Reid, fourth. Eight sets of three stems of Brussels Sprouts were set up. Mr. R. A. Horsford staged the best, though these were but poor at that; Mr. S. Cole was a splendid second; and Mr. J. Read third.

Nine contested for the set of eight Onions, the prizes falling respectively to Messrs. S. Cole, A. Basile, and R. Lye with good samples. The latter led for eight white Turnips, Mr. A. G. Gentle second, and Mr. J. Hall third. Potatoes were smooth, even, and of fine form and size. Mr. A. G. Gentle beat Mr. A. Basile for two varieties, eight of each; and third Mr. S. Cole. Mr. Gentle staged the premier dish of Tomatoes; and for six Beets Mr. S. Cole led. Mr. R. A. Horsford won for Leeks, and Mr. A. Basile for Parsnips. Mr. Cole had the best set of six Carrots. The Challenge Bowl this year was taken by Mr. Gentle, with forty-six points.

There were half-a-dozen splendid collections of nine kinds of vegetables in contest for Messrs. Webb and Sons' prizes. The first prize was £5, and went to Mr. E. Beckett with superb samples of Autumn Giant Cauliflower in the background; Celery Webb's Pearl White, and Colossal Leeks at either side. In front of these, at the middle sides, were Carrots (Prizewinner) and Parsnips (Improved Hollow-crowned), Onions of the variety New Masterpiece being in the centre. Potato Up-to-Date was represented by perfect samples. There were also Viceroy Tomatoes, and Matchless Brussels Sprouts, the whole laid over a deep bed of fine Parsley. Plenty of space was allowed between each kind of vegetable. The second prize fell to Mr. Jas. Gibson, Danesfield, who always tries Mr. Beckett closely; third, Mr. A. Basile; fourth, Mr. C. Brown; and fifth, Mr. W. L. Bastin. Exhibitors seem to require a great many lessons before they will attempt to display their produce effectively; or have they not the skill?

Fruit.

The Grapes were, on the whole, up to a high standard of merit, though the great fault with the Muscats was their want of colour. In class 60, for three bunches of white Grapes the premier award of £3 went to Mr. W. J. Batho, of Nether Street Nurseries, Finchley, with fair samples of Canon Hall, though rather behind in colour and shape. Second, Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill; and Mr. W. Lintott, gardener to Walpole Greenwell, Esq., Wardon Park, Caterham, was a fair third. There were some massive bunches of black Grapes on show, and here Mr. Lintott led the way with broad shouldered Alicantes in class 61, which brought six entrants. Mr. H. H. Brown, of Castle Hill Gardens, Englefield Green, must have been a remarkably close second, though in colour his berries were lacking. The third award fell to Mr. J. Landford, gardener to G. Wright Ingle, Esq., Wood House, Finchley, N., also with Alicante. Mr. W. Taylor beat Mr. W. J. Batho for the three bunches of Gros Colman Grapes. Batho's seemed the heavier bunches, but the quality of the individual berries was not so good. These were the only contestants.

Half-a-dozen collections of six dishes each of dessert Apples were staged. Mr. W. T. Stowers, gardener to G. H. Dear, Esq., 80, Harold Road, Sittingbourne, led, and was followed for second by Charles Walter, Esq., Wantage, Berks; and third, Mr. Bible, of Draycot Park. For a like amount of culinary Apples Mr. W. T. Stowers was first, Mr. Walter second, and third Mr. John Smith, Coombe Court, Kingston. Messrs. Stowers, E. Colman, North, Frith, and John Smith were placed so for six dishes of dessert Pears.

Medals.

The following medals were awarded to non-competitive exhibits:—Gold medals to Messrs. H. J. Jones, Cutbush and Sons, R. C. Pulling, W. and R. Owen, T. Rochford, H. Cannell and Sons, and W. J. Godfrey. Silver-gilt medals to Hobbies, Limited; Daniels Bros., B. S. Williams and Son. Silver medals to Mr. H. Love, J. Peed and Son, J. Williams, Spooner and Sons, and J. Boyes.

Our extended report of the miscellaneous exhibits and of the classes devoted to floral decorations is unavoidably held over till next week.

Shirley Gardeners' Association.

The programme of lectures, &c., from October to March, 1901-2, is as follows: November 18.—Lecture. "Summer Bedding, with special reference to plants to be used for Coronation Year," by Mr. J. B. Stevenson, Chine Garden Cottage, Bournemouth. Prizes awarded for six cut blooms Japanese Chrysanthemums, "distinct." Certificates for three best Chrysanthemums shown on stems of not less than 18in long. Vases will be supplied. December 16.—Lecture. "Some Familiar Wild Birds, with special reference to the Good and Harm they Do," &c., by Mr. E. J. Wilcox, the Gardens, Aldermoor, Shirley. Certificate offered for best plant in bloom, excluding Chrysanthemums. January 20, 1902.—Open night for discussion. To be opened by Mr. J. Jones, The Gardens, Terrace House, on "The Culture of Vines." Prizes awarded for four pots of Primulas, pots not exceeding 6in. Certificates for six best bulbs in flower of Roman Hyacinths. February 17.—Lecture. "Landscape Gardening," by Mr. F. Cleveley, Basset. Prizes awarded for best dish of Sea-kale, also for best three Hyacinths in pots. Prizes 3s. each. All plants to be grown in the pots in which they are shown. March 17.—Entertainment. Annual meeting date to be fixed and due notice to be given.—J. MILES, Hon. Sec.

Irish Gardeners' Association.

The inaugural lecture of the above was held on Tuesday, 29th ult., at Grafton Street, when, although the evening was decidedly unpleasant, the attendance was very good. Mr. F. W. Burbidge discoursed on "The Progress of Garden Craft." The lecturer indicated the tools which Nature had made for them, and, by means of lantern slides, he showed how Nature evolved the varied types of soils. Then he led his hearers into tropical life, pointing out the most striking types of vegetation and mode of living of same. He then gave a brief summary of the lives of prominent horticulturists, and a descriptive note of the foremost botanists, who have raised the curtain of Nature, allowing a greater grasp of plant life to be taken. He touched upon the varied types in cultivation, many of which have been only recently added to horticulture by the skill of the gardener. They comprised Orchids, flowering plants, shrubs, and Ferns, whilst the curious amongst plant types had a prominent place. This portion of the lecture finished with a choice series of slides, showing the marked strides horticulture had achieved by means of views of prominent country seats. Amongst these were Mount Usher, in co. Wicklow, the residence of Mr. Swalpole, which has earned the sobriquet of a tropical garden; also Castlewellan, in county Down, where shrubs and deciduous types attain to choice specimens. Some woodland walks through the grounds of Mr. Greenwood Pim in both winter and summer had a pleasant effect, the beauty of snow on leafless trees being vividly impressed. These were followed by a valuable series of views of aquatic types, especially Water Lilies, in Glasnevin and Trinity College Botanic Gardens; and of specimens alien to our shores which had been successfully acclimatised. The lecturer projected upwards of seventy slides, which were kindly lent by the chairman and Professor Johnson, D.S.C., many of which were choicely coloured. A hearty vote of thanks was passed to the lecturer and to the chairman.

Death of Mr. James Cypher.

After an illness extending over four months, Mr. James Cypher, Queen's Road Nurseries, Cheltenham, breathed his last on Friday, November 2, and was buried amidst signs of universal regret and esteem on Monday, November 4. From an exhibitor's point of view Mr. Cypher was the Grand Old Man of horticulture. No grower of plants or firm of nurserymen has been so long and consistently pre-eminent at all the principal flower shows in the country, and wherever he went he made many friends, and not, to my knowledge, a single enemy. Always genial, kind, and enthusiastic, and without the slightest particle of pride other than that which he, justifiably enough, took in the productions of his own nurseries, he was welcomed wherever he went, while his exhibits have been the making of innumerable shows. Not only was Mr. Cypher most popular in all parts of the country, but he also gained the respect and esteem of all classes in Cheltenham, and it is ungrudgingly conceded that he did much to advertise, beautify, and increase the popularity of that attractive "Garden Town."

Mr. Cypher was born in Tetbury, Gloucestershire, and if he

had lived till December 31, would have been seventy-five years of age. He made a comparatively small beginning as a private exhibitor of plants, and from that humble start, which I have heard him describe more than once, has sprung the well-known Queen's Road Nurseries. These nurseries cover several acres of valuable building land, and comprise seventy well-constructed plant houses, together with much valuable nursery stock. Mr. Cypher prided himself upon having taken some of the best prizes at all the important shows in the country, and of being repeatedly represented at two or more on one day. At many of these shows I have seen three to five large vans closely packed with valuable plants, his greatest efforts, probably, being expended in the direction of Shrewsbury every August, and yet no very appreciable inroads into his stock of plants would be observable by visitors to the nurseries at those times. For the sake of the societies he so ably supported, it is to be hoped that the work carried on so well by the late Mr. Cypher for upwards of a quarter of a century will be continued by his sons who succeed to the property and business.

In addition to the production of so many grand prize-winning plants, Mr. Cypher also established a great reputation as a grower and raiser of Orchids, a large and valuable stock of plants

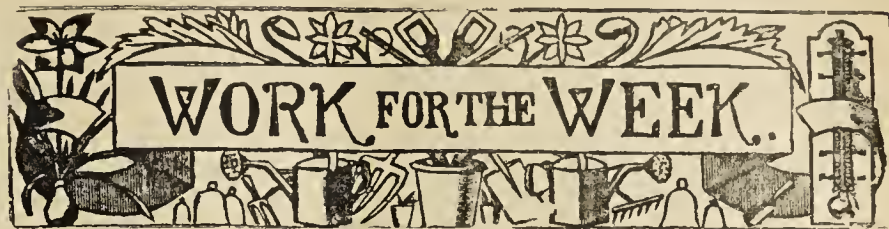


THE LATE MR. JAMES CYPHER.

bearing witness to this fact, and the business further comprises an extensive connection in the direction of floral decorations of all kinds.

With all this on his hands, Mr. Cypher yet found time to enter public life, representing the West Ward as a guardian since 1884, and becoming, a little later, a member of the Town Council, which honourable office he held up to within a few hours of his death. He was an extensive employer of labour, a very kind master, and was deservedly loved by all connected with the nurseries. Altogether, Mr. James Cypher was a man we can ill afford to lose, and many of us will miss his kindly welcome when it is our good fortune to call at the Queen's Road Nurseries, and shall miss him greatly at the flower shows he has delighted to attend so long as he was able.—W. I.

I am sure that the sad news of the death of the above gentleman will come to many readers as a shock, although it has been known throughout this district for many weeks past that he was in a very serious state, and that his medical attendant could not give his family encouragement as to hopes of any permanent improvement in his health. I have had the privilege of knowing Mr. Cypher for many years, and have frequently had long chats with him on his past career, of which he rejoiced to relate. How he began his gardening career, and how by industry he built up the large business now established in Queen's Road, Cheltenham, is a story of heroic endeavour. It was, indeed, a great privilege to have an opportunity of spending a little time in conversation with such an honest, straightforward, and noble living gentleman as the late Mr. James Cypher.—T. A.



Fruit Forcing.

VINES: EARLIEST IN POTS.—Stout, well-ripened canes, with plump buds, given a short rest, will, if started now, afford fruit for table in April. The best varieties are White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court. The Vines require a light, airy, efficiently heated structure, which may be a lean-to or three-quarter span-roof, facing south. If the hot water pipes are at the front of the house, the Vines may be stood upon them on tiles or slates. The drainage of the water given (not dripping on the hot water pipes and passing off as steam, but on the floor) keep up a genial moisture, as well as afford ammonia to the atmosphere when liquid manure is used.

Pits having beds in which fermenting materials may be placed answer admirably for forcing Vines in pots, contingent on their having the necessary hot water pipes for top heat. Pedestals of loose brickwork should be formed in the beds, so as to raise the pots to the requisite height and prevent sinking, as would be the case were the Vines stood on the fermenting material. This is essential, whether the Vines are trained to a trellis at 12in to 15in distance from the glass, or coiled round stakes where there is no trellis. Vines in pots, and restricted thereto, afford excellent fruit when judiciously fed, but if weight and quality of Grapes are desired, the apertures in the pots should be widened and some turfy loam placed within reach of the roots. The loam may be placed against the pedestals of loose brickwork, and the roots will follow the liquid manure given and gather support for the Vines. Oak or Beech leaves are best to afford bottom heat; they afford a genial warmth and regular moisture in the early stages, and yield stimulating food when the demands of the Vines are greatest. Damp the Vines and house two or three times a day, and maintain a temperature of 55deg., and 65deg. in the day-time.

EARLY FORCED PLANTED OUT VINES.—To have ripe Grapes at the end of April or early in May the house must be closed by the middle of the month. This more particularly applies to young and vigorous Vines, that do not, as a rule, start into growth so quickly as those that have been forced for a number of years. This is also the case with Vines that have previously not been subjected to early forcing. To produce a humid atmosphere and economise fuel, a good ridge of fermenting material may be placed upon the floor or border, and turned at short intervals, additions being made as the heat declines. The temperature of the house may range 50deg. at night, 55deg. by day, and 65deg. on bright days. The outside border should be protected from wet and frost by a covering of leaves or other approved means.

LATE GRAPES NOT FINISHING WELL.—This arises from three primary causes: (1): Starting the Vines too late, and not accelerating thorough growth during the spring and early summer months, so as to give the Grapes the full benefit of the summer sun to swell and ripen. (2) Overcropping, which not only prejudices the current crop, but militates considerably against the succeeding year's bearing of the Vines. (3) A bad condition of the roots, this being the most disastrous of all, for improper food is attended with many evils, and hinders the perfection of the crop. If the defect is due to overcropping, relief should be sought by cutting a portion of the crop at the earliest convenience, and though nothing will be gained by pushing the fire now, the temperature should be maintained at 60deg. to 65deg., and 70deg. to 75deg. in the daytime, so as to secure the thorough ripening of the wood, admitting air freely when the weather is favourable, and leaving a little on constantly. When the cause can be traced to improper drainage or bad border, no time should be lost after the wood becomes sufficiently ripened, or when the leaves give indications of falling, in getting out the old soil, rectifying the drainage, and relaying the roots in fresh compost.—ST. ALBANS.

The Kitchen Garden.

ROOT CROPS.—BEET.—The roots ought not to be left longer in the ground. Lift them on a dry day, and after twisting, not cutting, off the top a few inches above the crown, spread them out to dry in the open, or, anticipating rain or frost, in the shelter of a shed. After drying, they are better fitted to be stored away in a frost-proof, but cool, shed or out-house. Place them between layers of dry wood ashes or sand.

CARROTS.—Intermediate and long-rooted Carrots ought also to be lifted and stored, if not already done. Those wanted for immediate use ought to be placed in a cool, convenient place, slightly covering to prevent them drying unduly. The rest of the crop, if not in considerable quantity, may be stored in a

similar manner to Beetroot, but a large crop can be more conveniently clamped or pitted in the open ground. For household use, however, the best plan is to pick out all the best and most suitable roots adapted for culinary purposes, and store them in a dry, cool shed, between layers of dry earth, ashes, or sand.

TURNIPS.—It is not necessary to lift and store the whole of the Turnip crop. Some of the roots may be left in the ground from which they can be drawn as wanted in mild weather. A portion may be lifted and stored in a heap, covering them with ashes to exclude air and light. These are available for early use, and at times when inconvenient to obtain them from the open ground.

ARTICHOKES.—Jerusalem Artichokes are usually best left in the ground until wanted. A few tubers may be dug up and stored in soil to be conveniently at hand for occasions when the weather is inclement. Later on a considerable bulk of tubers may be thus stored in the event of a long protracted frost occurring.

PARSNIPS.—Parsnips, as a rule, ought not to be lifted and stored, as the roots keep better in the ground, and may be dug up as required. On the approach of very severe frost, throw some litter over the ground where the roots are, or lift a portion, storing them in ashes or soil in a sheltered position.

POTATOES.—The lifting of the Potato crop must be completed, and the tubers safely stored from frost and wet. If pitted outside, form the ridges in a well drained position. Cover with dry straw, and bank over that a good covering of soil. Dry, cool, frost-proof sheds may also be utilised. Cover the tubers to exclude light. Those previously stored should be examined, so as to remove any damaged and diseased examples.

CHICORY.—A few strong roots may be dug up, securing them without injury. Remove the tops just above the crown, and place the roots in soil or leaf soil in deep boxes or pots, which should be stood in an absolutely dark position in a temperature of 45 degrees to 50 degrees. When the blanched leaves are 3in long, break them off for use.

SALSIFY AND SCORZONERA.—Though the roots of these may be left in the ground until required, they may, if more convenient, be lifted and stored in layers of sand or soil. When lifting twist off the leaves in a similar manner to Beet.

HORSERADISH.—It is a good plan where there is frequent demand for this to dig up a quantity of the strongest roots and place them between layers of ashes under the shelter of a wall, where they are readily available for use.

ASPARAGUS.—The withered stems of Asparagus should now be cut down to within an inch or two of the soil. Beds infested with weeds of a perennial character must be carefully forked out, leaving the surface of the bed loose. Give a dressing of soot, enough to blacken the surface, slightly pointing it in. A layer of rich manure not more than 3in thick may then be spread over the whole surface of the beds, and a sprinkling of soil scattered over the manure from the alleys between the beds.

CABBAGE.—In dry weather hoe down the weeds between the rows of plants placed out this autumn. Frequent hoeing during dry periods is the best cultivation that can be given them in winter.

CAULIFLOWERS.—Autumn Cauliflowers with well developed heads just turning in should be protected from the effects of frost by laying leaves over them. If the heads are fully grown, the plants may be lifted and stored in a frame or sheltered position outside.

Hardy Fruit Returns.

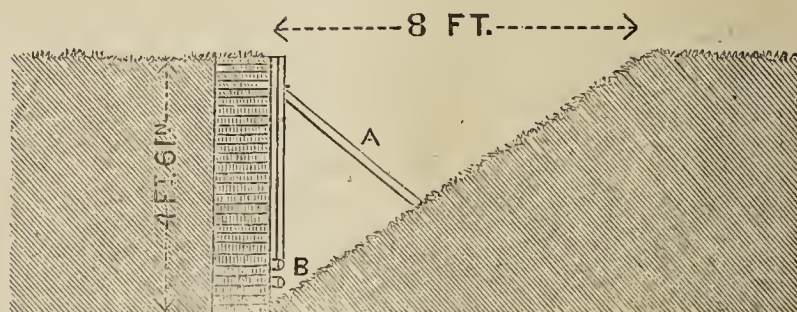
The recently issued official returns of the acreage under hardy fruits in Great Britain are hailed with satisfaction by horticulturists as showing, if no very great increase in fruit-growing as compared with last year, at all events a great development since in 1888 a conference met at the Crystal Palace for the purpose of calling attention to the importance of the matter. At that time, notwithstanding an increased demand for fruit on the part of the public, there had been a marked decrease in the area under fruit culture. Some enthusiasts, however, were convinced that, rightly conducted, and with due regard to the needs of the market, fruit culture, either on a large or a small scale, might be carried on profitably in nearly all parts of the United Kingdom. The agitation then started spread throughout the land, and practically a new industry was started, with the result that at the present time there is more than twice as much land under fruit culture as in 1888. The advance has been largely in Currants, Gooseberries, Raspberries, and Strawberries—particularly the last-named, of which experience shows the great towns are prepared to accept almost unlimited quantities. Fruit culture is somewhat unevenly spread over districts, Kent still taking an immense lead, owing both to its advantages of soil and its neighbourhood to the Metropolis; but there is hardly any part of England, at all events, in which there has not been some advance. If the increased supply has not had the effect it should have in lowering prices and improving quality, the means of distribution is at fault; but that is another and a very long story.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

SUBSTITUTE FOR OLD MORTAR RUBBISH IN MAKING BORDERS FOR VINES AND PEACHES (Constant Reader).—The nearest and best substitute is calcareous gravel, which may sometimes be procured as waste material from chalk pits, and as your soil is inclined to be light, more inclined to a calcareous than siliceous nature. Such material may usually be had by arrangement with dealers in lime. Failing such material, chalk is the best substitute, it having been some time exposed to the weather, so as to become broken up, or what is popularly known as "fallen," by the action of frost, using one part of chalk and two parts of road scrapings instead of the usual amount of old mortar rubbish.

THE MAKING OF A HA! HA! (Young Head).—The term Ha! Ha! was given in ridicule long ago—about Humphrey Repton's time—to a sunk-fence. The story goes that two ladies once enjoying a walk in the pleasure grounds of a large estate, upon entering a smooth and forward-stretching piece of lawn,



PLAN FOR MAKING A HA! HA!

suddenly saw oxen in front of them, and, being in no ways protected or escorted, their screaming and consternation was great. Eventually they reached a safe distance from the cattle, as they considered, but were more than embarrassed and piqued on finding later that a sunk-fence, such as shown in the diagram, divided them and the object of their recent fears. Someone—we forget whom—upon hearing this story related ironically, baptised the sunk-fences as "Ha! Ha's!" The object, as you are aware, is to add picturesque effect to the outlook, for in place of a wall or hedge, the sunk-ditch or "fence," as it is called, is not seen until one is close upon it. To save the expense of a stone or brick wall we might suggest one made of turves, and each turf should be 2in thick. Careful building is important, for, however skilful the turf-cutters are, some of the turves are certain to prove uneven; and, if they are not laid truly and well, the wall may fall. When properly set, fresh turves soon grow together. To avoid risk, you should place stays and pieces of rough board at intervals along the wall, as at A in the figure. Two-inch pipes, as at B, may also be inserted at intervals through the turf. The stays should remain till the turf has grown together and is quite safe.

BLIND FOR GLASS HOUSE (Ignoramus).—We have tried almost every kind of invention, but find none to equal the old-fashioned roller and canvas blind, as that is so easily let down or drawn up as required, and with care will last for a number of years. The material known as "'A' White" is most highly recommended for greenhouses, and may be had cut, sewn, and taped ready to fix upon the roller, or supplied complete with roller and fittings. We advise you to apply to Messrs. Wood and Son, Limited, Wood Green, London, N., stating requirement, and asking for estimate. We do not advise slack blinds, not even teak, and pineoleum and Parisian are beyond our power to describe without illustrations. They are too clumsy, too liable to get out of order, and though serviceable for windows and the upright parts of greenhouses, do not answer well for the roofs. Such is our experience, but the matter is one that would be profitably discussed by those with experience in our columns.

PLANTING SPRUCE FIR ON HEAVY LAND (W. J.).—

The Norway Spruce (*Picea* syn. *Abies excelsa*), being a surface rooting tree, succeeds on heavy land, especially if well under-drained, or there are open drains to prevent the land from being swamped. As the land has been trenched two spits deep, and we presume the bottom, if of a stubborn nature, broken up with a pick, but not brought to the surface, we do not see why the Spruce should not thrive, though in exposed places they do not prove satisfactory, especially in a thin belt, after attaining a height of about 30ft. or twenty to twenty-five years age. Indeed, they are not suitable for outside of plantation planting in very exposed places, especially when thin, but this may be obviated to a great extent by attention to early thinning, never over-doing it, so that the trees shelter each other. For exposed situations Austrian Pine, *Pinus austriaca*, is the best coniferous tree, and you should employ it along with the Norway Spruce, and for variety introduce Corsican Pine, a more rapid grower than Austrian Pine, and it is very desirable for exposed situations, never inclining with us in the most exposed places, as the Austrian Pine does where exposed to strong wind. Still, it (Austrian Pine) bears the brunt of the fiercest gales from land or sea, and should be used largely on the outside of the plantation. The noble Silver Fir (*Abies* syn. *Picea nobilis*) does splendidly on heavy land, and is a very beautiful tree, contrasting finely with the brown of Norway Spruce.

SCIENTIFIC EVIDENCE THAT EXPLAINS THE PHENOMENON OF CERTAIN FLOWERS EXHALING PERFUME AT NIGHT ONLY (W. C. R.).—

We are not aware of any scientific evidence on the odours of plants and flowers beyond that based on known proclivities, and certainly not any accounting for some plants or flowers giving forth their odours during daylight, and especially during its most sunny hours, examples of which are afforded by the flowers of many of the Labiatae, the Orange, and the Cistus families, while others, such as *Hesperis tristis* and *Gladiolus tristis*, are fragrant only during the night. Nor, so far as we know, is there any scientific evidence or explanation why the fragrance of certain plants, such as Sweet Briar, is most pronounced after rain or even in the evening. Indeed, it is almost an untrodden path, not only from a practical, but more especially scientific point of view. Soil, and even situation, have a great

fluence on the odour. Thus, on the shores of the Mediterranean, near Grasse and Nice, the Orange tree and the Mignonette bloom most deliciously in low, warm, sheltered spots; while in the same region, the Violet grows sweeter as ascent is made from the lowest land and approach the foot of the Alps. So, Lavender and Peppermint grown at Mitcham, in Surrey, yield oils far exceeding those of France or other foreign countries. This effect of soil and climate on the odour of plants resembles that which they exercise in so remarkable a manner on the narcotic constituents of tobacco, opium, and hemp. The agent rendering any plant odoriferous arises from a highly volatile oil, which is notably affected by external influence as well as by soil. Some plants flower only at night—why, is one of the mysteries of Nature, just as plants observe various seasons of blooming. Why? It is Nature, and who can unfold its hidden mysteries?

NAMES OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (D. McIntosh).—Apples: 1. Worcester Pearmain; 2. Egremont Russet; 3. Striped Beefing. Pears: 1. Princess; 2. Urbaniste; 3. Josephine de Malines; 4. Winter Nelis. (J. Pitts).—1. Duchesse d'Angoulême; 2. Pitmaston Duchess. (L. F.).—Apple Mrs. Barron.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (M. Carpenter).—Alonsoa Warscewiczii. (H. Pugh).—*Strelitzia reginae*, a plant which you are to be complimented on having grown so successfully. These flowers last in good condition for months. They are fortunate with this remarkable plant at Kew, where it is a source of the greatest interest. (H. M.).—Your specimen leaf is that of a species of *Karatas*, near *rutilans*, one of the Bromeliads. They are slow-growing yet interesting plants, especially when one knows a few facts about their various characteristics.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Trade Catalogues Received.

Wm. Clibran & Son, Seed, Bulb, and Plant Merchants, Oldfield Nurseries, Altrincham.—*Trees, Roses, Shrubs, and Fruits.*
Dammann & Co., Seed and Bulb Growers, San Giovanni a Teduccio near Naples, Italy.—*General Price List of Garden Stock Generally*

Covent Garden Market.—November 6th.**Average Wholesale Prices.—Fruit.**

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, case	24 0	to 30 0
„ dessert	3 0	6 0	Melons, each	0 9	1 0
Bananas	8 0	12 0	Pears, English, ½ sieve	2 0	6 0
Figs, green, doz. ...	1 6	2 0	Pears, French, crate ...	4 0	9 0
Grapes, Alicante, lb. ...	0 6	1 0	Pines, St. Michael's,		
„ Colman	0 8	1 6	each	2 6	4 6
„ Hamburgh	0 6	1 0	Plums, ½ sieve	3 0	4 0
„ Muscat	0 9	2 0	Walnuts, ½ sieve	2 0	3 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Horseradish, bunch ...	1 0	to 0 0
„ Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1½	0 2
Batavia, doz.	2 0	0 0	Lettuce, Cos, doz. ...	0 0	2 0
Beans, French, per lb.	0 8	0 9	Mushrooms, forced, lb.	0 6	0 8
Beet, red, doz.	0 6	0 0	Mustard & Cress, pnt.	0 2	0 0
Brussels Sprouts, ½ sieve	2 0	2 3	Parsley, doz. bnchs ...	2 0	3 0
Cabbages, tally	1 6	3 0	Potatoes, English, cwt.	3 0	4 0
Carrots, doz. bnch. ...	2 0	2 6	Radishes, doz.	0 6	0 9
Cauliflower, tally ...	4 0	6 0	Shallots, lb.	0 2	0 3
Corn Salad, strike ...	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	2 0	3 0	Tomatoes, English, lb.	0 3	0 4
Endive, doz.	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5	0 to 12	0	Ferns, small, 100... ..	10 0 to 16 0
Araucaria, doz.	12	0	30 0	Ficus elastica, doz. ...	9 0 12 0
Aspidistra, doz.	18	0	36 0	Foliage plants, var, each	1 0 5 0
Chrysanthemums, doz.	6	0	30 0	Lycopodiums, doz. ...	3 0 0 0
Crotons, doz.	18	0	30 0	Marguerite Daisy, doz.	6 0 10 0
Cyclamen, doz.	10	12	0	Myrtles, doz.	6 0 9 0
Dracæna, var., doz. ...	12	0	30 0	Palms, in var., doz. ...	15 0 30 0
Dracæna, viridis, doz.	9	0	18 0	„ specimens	21 0 63 0
Erica gracilis, doz. ...	10	0	12 0	Primulas	3 0 4 0
„ caffra, doz.	15	0	18 0	Shrubs, in pots	4 0 6 0
Ferns, var, doz.	4	0	18 0	Solanums	8 0 10 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.				
Arums, doz.	5	0 to 6	0	Lilium l. rubrum ...	1 6 to 2	0			
Asparagus, Fern, bnch.	1	0	2	0	Lilium longiflorum ...	3 0	4	0	
Bouvardia, white,					Lily of the Valley, 12				
doz. bunches... ..	4	0	6	0	bnchs	12	0	18	0
Bouvardia, coloured,					Maidenhair Fern, doz.				
doz. bunches... ..	4	0	6	0	bnchs.	3	0	4	0
Camellias, white... ..	3	0	4	0	Marguerites, white,				
Carnations, 12 blooms	1	0	1	3	doz. bnchs.	1	0	2	0
Cattleyas, doz.	8	0	12	0	„ yellow, doz. bnchs.	0	6	1	0
Chrysanthemums,					Odontoglossums	4	0	5	0
specimen blooms,					Primula, double white,				
doz.	1	0	4	0	doz. bunches... ..	5	0	6	0
„ white, doz. bnchs.	2	0	8	0	Roses, Niphetos, white,				
„ coloured, doz. bnchs	2	0	8	0	doz.	1	0	2	0
Cypripediums, doz. ...	3	0	4	0	„ pink, doz.	2	0	4	0
Eucharis, doz.	1	6	2	0	„ yellow, doz. (Perles)	1	6	2	0
Gardenias, doz.	2	0	2	6	„ red, doz.	0	6	1	0
Geranium, scarlet, doz.					Smilax, bnch	1	0	2	6
bnchs.	3	0	4	0	Stephanotis, doz. ...	3	0	0	0
Hyacinth, Roman,					Tuberoses, gross	4	0	5	0
doz. bunches... ..	15	0	18	0	Violets, single, doz ...	1	6	2	0
Lilium lancifolium alb.	2	0	2	6	„ double, doz.	3	0	4	0

**The Coming Winter and Cattle Feeding.**

"It is the unexpected which always happens," and we have become so accustomed of late to mild winters that one of the old-fashioned type might readily find us very unprepared for it. The supply of straw is decidedly less than an average one; the surplus stock has been dwindling for two or three years under the influence of too dry seasons, and there is very little reserve to draw upon. The same may be said in respect to hay. This year's crop is of very good quality, but much under the average as regards quantity, which is shown by the very decided rise in price.

Mangold is a good, almost a bumper, crop, but the acreage

is too small to make itself felt, whereas Swedes and Turnips, though not so bad as in 1899, are below an average, apart from the absolute failure of some districts from drought. These barren fields—many of them of great extent—must exert considerable influence on the average of the country, and this leads us to warn our readers that cattle and sheep foods are likely to increase in value as soon as farmers generally realise the true condition of affairs. There is one trait which is a personal characteristic of every farmer, and perhaps we might say of almost everyone else, i.e., prophesying that of which we desire the fulfilment. At the present time cakes are decidedly dear, and the farmers say they will be cheaper—must be cheaper. But will that make them so? The farmers would rather pay less for them; but though the wish may be father to the thought, its influence may be very small when a forced purchase has to be concluded.

The situation may be easily understood if the week's markets for feeding stuffs are closely studied. Prices rarely come under other influences than those of supply and demand. This week first-class linseed cakes are quite worth £8 10s. per ton and cotton £5, with a very firm tendency. Clover is quoted up to £5 15s. and hay £5 5s., whilst straw is worth 70s. to 85s. per ton. It is not a very cheerful prospect for the man whose farm is heavily stocked with hungry mouths beyond its capacity. That prices of cattle foods will rise sooner than fall we do not doubt, and wise are those men who have made contracts for the winter supply of cake. Dried grains are quoted £5 10s. at Burton, which with carriage would mean £6 or thereabouts. Malt culms are cheaper at £4 15s., and are in our opinion the cheapest available food except home-grown Barley and Wheat. Good sound grain of each kind is now being sold at about 8½d. per stone, which is £5 13s. 4d. per ton, a lower price than that of dried grains and very little more than cotton cake. No doubt many farmers, resenting the enhanced price of cakes, will consume a portion of their own grain. We know that some are already doing so. If their land be in good condition and the tenure certain, the substitution of meal for cake just during one season may pay the cattle feeder without hurting the land to any extent, but we should not advise anyone to make a practice of doing so.

We know of one or two who do; but they have but a small proportion of arable land, and graze large quantities of cattle throughout the winter, the animals living chiefly on grass, with the addition of a little cut hay damped, with meal mixed amongst it. This is altogether a different thing to consuming all the corn grown on a mixed farm, which we have heard some advocate. We know several who tried it a few years ago when Wheat was down below 20s., but they all concluded not to do so again, except to a limited extent. There is no doubt that a certain quantity of barley meal is essential to success in the finishing of prime Christmas beef, or, in fact, of any beasts which are properly done. There is strictly a limit to the cake-consuming capacity of all animals, and as regards the paying return from the cake, the lucrative point is much more quickly reached than many would believe. There are few bullocks which will pay for more than 10lb of cake per diem, but 4lb or 5lb of meal in addition often pays well. Sufficient attention is not given to the likes and dislikes of animals. Thirty or forty bullocks, perhaps, may be all fed from one mixture of food. Eighty per cent. of them may do as well as can be wished, whilst the others do not feed up and make unsatisfactory progress. The clever feeder will not rest until he finds out what they will relish; but too many would simply class them as bad doers, and sell them half fat to someone else after they have for months been giving a poor return for food which was unsuitable to their organisations. Bullocks are beautiful pieces of machinery; but they are not all exactly alike, and must only be treated as machines within certain limitations. We know what a change of pasture very often will do for both cattle and sheep.

Well! If we find a certain percentage of our animals making poor headway, and taking less food than they should, we must not blame them straightaway, but endeavour to make the conditions more suitable for them. These so-called bad doers should be drawn out and housed separately or in pairs, changes of food being made until that is found which they eat up well, finding it the most to their liking. Some cattle will eat almost anything, and are always in good condition. Occasionally, but not often, the

water supply may be such as does not suit some animals. In other cases the use of badly got hay or straw, cut up and mixed with other foods, is responsible for slow progress on the part of the more delicate members of the herd. All these points the clever, intelligent feeder will easily discover, and, instead of selling off such animals in disgust, surprise his neighbours by having no culls. In cattle-feeding, as in everything else, two things are required—energy, and brains to direct it.

Work on the Home Farm.

Yesterday we witnessed what we considered a triumph of skill in the way of agricultural labour. A neighbour's field of seeds had been steam ploughed and dragged in a somewhat perfunctory manner, and a man with a ridging plough, three horses, and a boy to lead them, was engaged in making very straight and good ridges across the ploughing. The plough was a good one, the horses were good, and the man appeared to us to be a Hercules. The land had been ploughed 10in deep, and left almost as rough as was possible, and the work was almost like ridging amongst rocks on the seashore. We can give that man a character when he wants one. He remarked on the mildness of the weather; it made us hot to see him.

The August sown Cabbages are growing into fine plants, and it is time that a portion was planted out. The manure is now being spread ready for ploughing in. The supply is rather limited, or we should have liked to give a better allowance than twelve loads per acre. Sixteen may to some appear extravagant, but the Cabbage is one of the crops which pay for high tillage. The manure merchant will get an extra order in February. The manure must be rich in nitrogen, and it must be applied early in the spring. The ewe flock is on new seeds, other food being scarce. The young Clover looked fairly promising when the sheep went on, but a very few days' grazing have made the pasture look very bare. It is a painful fact that much of the young Clover perished from drought, and the growing plants are anything but an adequate covering to the ground. Some farmers have been sowing Rye grass to fill up the gaps. Trefoil is a good thing for filling up, as it easily takes root, and is hardy. It is very good as a restorer of fertility, as its roots store a large amount of nitrogen; but it is the worst of the Clover tribe as a sheep food simply. Men are still very scarce. We hear that trade is bad in the towns, but there must be sufficient employment for our errant prodigals, as they do not return to us.

CHESHIRE POTATO LIFTING.—Mr. William Marsland, farmer, Baguley Hall, was last week summoned at Sale by John McGerry and two other Irish labourers for small balances of account for Potato getting. Mr. Newman, solicitor for the defence, admitted the facts, but said the matter was a serious one for Cheshire farmers, and if the defendant's contention were allowed—that they could go away before Potato-getting was over—business could not be carried on. It was very much easier to get Potatoes in September than at the present time, and the complainant's contention that they could leave before all the Potatoes were got was an untenable one. Several witnesses were called on both sides showing the custom prevalent; but the Bench, while sympathising with Mr. Marsland, thought the contract was not sufficiently defined, and made an order in each case.

MR. LEWIS WRIGHT OF BRISTOL.—The name of Mr. Lewis Wright is known all over the world through his writings upon poultry, and more especially by reason of his monumental work, "The Book of Poultry" which, first issued nearly thirty years ago, has done more to advance the scientific breeding of poultry and spread fowl culture than any other publication. He was a valued contributor to the *Journal of Horticulture* when that paper was the chief journal dealing with poultry. In addition to writing "The Book of Poultry," many other works have appeared from his pen, notably "The Practical Poultry Keeper" and "The Brahma Fowl." Further, he edited "The Book of Pigeons," and within the last few months has edited "The Poultry Club's Standard," just issued by that body. Until recently Mr. Wright has resided in London, but has now returned to Bristol, his native city. It has been felt that some acknowledgment should be made of his life's work, more especially as "The New Book of Poultry" is fast approaching completion, a work which shows the same keen observation and wide experience which gave the first edition of that work so vast an influence. Recently a private meeting was held, at which it was resolved to present an address to Mr. Wright at a complimentary dinner in December next. A committee has been formed to make the necessary arrangements. All who desire to share in this tribute of respect and esteem for Mr. Lewis Wright (1) by subscribing to the address—quite small subscriptions are expected, the name being the chief thing—and (2) by attending the dinner to be held in his honour, are requested to communicate with the secretary. —EDWARD BROWN, Secretary, 12, Hanover Square, London, W.

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Journal of Horticulture

THURSDAY, NOVEMBER 14, 1901.

A Chat About Apples.



HORTICULTURAL literature on the practical side is largely composed of reiteration; sometimes we have to repeat ourselves, more frequently we are repeated by others, or repeat them; but we may satisfy our consciences that such is the experience of all teachers, and it must continue so while

there are learners to be taught. These remarks will, I hope, prepare old readers not to expect anything fresh, but there are so very many ignorant of the simplest matters connected with Apple culture generally, that one can hardly miss reaching some of the unlearned. First may be noted the gathering of the fruits. Cases have come under my notice this year of the barbarous practice of shaking or knocking off the fruits and then gathering them off the ground, a practice that not only damages a great proportion of the fruit, but which is also hurtful to the trees, inasmuch as many buds are destroyed. Next in degree of viciousness to that practice is that of twisting off the fruits, a very harmful one to the trees also, as many buds are removed in the process. The only good method is to raise each fruit gently, which, if sufficiently matured, will become detached from the tree in a natural manner at the junction of the stalk with its spur. As a rule, too, Apples are gathered, with perhaps the exception of the very earliest, before they are quite ready. Even the rough and ready method of estimating maturity by the colouring of the pips, is not to be depended on, lots of Apples being better to hang even after the pips have coloured. But the least commendable practice of all is the too prevalent one of harvesting late varieties weeks before they are ready. The result inevitably is that such fruits do not keep long, and consequently one main

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SOME SORTS OF BULBS NOTED OUT PRICE LIST.

	Per 100.	Per 1000.		Per 100.	Per 1000.
	s. d.	s. d.		s. d.	s. d.
Hyacinths, in the finest mixture, for bedding or forcing	11 0	105 0	Dahlias, Single, in the finest mixture	8 4	—
Hyacinths, Single, first size, named, in several leading sorts, red, white, and blue varieties, equal quantities, my selection	20 0	—	Anemone, Single, mixed	1 4	12 6
Tulips, Single early, in the finest mixture	1 10	16 8	Anemone, The Bride, pure white	1 8	15 0
Tulips, Double early, very fine mixed	2 2	20 0	Anemone apennine (blue Wood Anemone)	3 0	25 0
Tulips, Single Duc van Thol, mixed, for forcing	2 6	20 0	Anemone apennine (white Wood Anemone)	5 0	—
Tulips, Duc van Thol, scarlet-red	2 6	20 0	Anemone nemorosa (double White Wood Anemone)	6 0	—
Tulips, La Candeur, double white	3 4	30 0	Anemone japonica alba, pure white	4 0	—
Tulips, Single La Reine, rose-white	2 0	18 4	Dielytra spectabilis, red (Bleeding Heart)	12 6	—
Sparaxis, very fine, mixed	0 8	6 0	Funkias, in the finest mixture	10 0	—
Triteleia uniflora, pure white, very fragrant	1 6	—	Narcissus-Polyanthus, in the finest mixture	4 0	38 0
Ixias, in the finest mixture	0 6	5 0	Narcissus, Double, mixed	3 6	30 0
Crocus, first size, in the finest mixture	0 10	8 0	Narcissus, Single, mixed	1 4	12 6
Crocus, second size, in the finest mixture	0 5	4 0	Narcissus, Trumpet, mixed	2 6	20 0
Crocus, yellow, third size	0 6	4 2	Narcissus, Campanelle, pure yellow	1 2	10 0
Spanish Iris, in the finest mixture	0 7	5 0	Ranunculus, French, mixed	1 0	9 0
Iris Kämpferi (Japan Iris), mixed	5 0	40 0	Ranunculus, Persian, mixed	1 0	9 0
Iris sibirica, very fine, mixed	4 0	40 0	Snowdrops, Elwell, Giant Snowdrop	1 6	13 0
Montbretia crocosmæflora, orange-scarlet	1 6	—	Gladiolus, Marie Lemoine, cream	2 6	—
Montbretia, very fine, mixed	5 0	—	Gladiolus Brechleyensis, scarlet-red	2 6	20 0
			Gladiolus Colvillei alba, pure white	2 10	10 10
			Azalea ponticum, each, 10d. to 1/8.		

250 Bulbs of the same kind will be charged at the 1000 rate; 25 at the price per 100; 6 at the price per 12

Collection D.—For Spring Garden, containing 1330 Bulbs, £1 1/-. Half of this, 11/-.

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READERS are requested to send Notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other Address.

reason for growing them at all is nullified, and, further, the fruit never attains to that perfection of flavour that it does in late spring or early summer, when allowed to remain to the latest moment on the trees.

One of the old school, whom the other day I found busy storing away his late Apples, made it a chief objection to allowing them to stay longer than the best of the fruit would be blown, and thereby spoilt. Of course, it would be a sufficient answer that only a part secured in perfect condition is to be preferred to the whole imperfect; but it does not follow that late hard Apples blown down in October, or early in November, are therefore worthless. I have noted the fact previously that such fruits may be preserved only a little less perfectly than hand-gathered fruits. More than once I have kept fallen examples of Alfriston, Northern Greening, and Bramley's Seedling into the month of May, and other sorts according to their season of ripening. This is rather an important matter. And I would urge gardeners who have not hitherto done so to try keeping late blown Apples.

Late versus Early Apples.

It is quite certain that the supply of Apples in at least some parts of the country is very limited, and numbers of establishments will have used up their own produce by mid-winter. The immediate cause is doubtless the shortage of the Apple crop, but the primary cause lies deeper. We have all been too fond of cultivating large, early, free cropping sorts, and paying too little attention to late ones. Only the other week I noticed a list of twelve sorts recommended, in which but only two sorts to ripen after Christmas were named, the majority being fit to use in September. If the shrinkage of the present year is the means of accentuating the folly of catering for a time of year when we have plenty of other perishable fruit, and forces attention to the miserable means we have at command to supply an unfailing everyday supply of late Apples, why, we need not grumble at its drawbacks, but be thankful for its teaching.

The Trees Themselves.

Where the management of the trees has been sound, the past two years have been characterised by weather that has suited them perfectly. The foliage, as a rule, has been large and clean, canker has made no headway, and while fruit has bulked large individually, the quality has been of the best. While that is so, young trees should not be neglected at root. Lifting and replanting the younger trees, and root-pruning those of a larger size, should certainly be made a part of their autumn management. Canker, though less prevalent than in most seasons, is, however, not absent, and while attention to the roots is of very great importance, it will not do to fail to attack the disease itself locally. Remedial measures consist in removing every bit of diseased wood and bark. To remove every bit of disease sometimes requires the cutting down of the tree, and if it be still young, so extreme a measure is certain to be successful, and the new growth of which the framework of the new tree is to be formed will be clean and healthy. With older trees, heading down is of doubtful efficacy; but cutting back diseased shoots to clean wood, cutting out affected spurs, and excising portions of stem and branches that are being eaten away are all valuable remedies. I had some dozen or more trees of Warner's King, which got terribly canker-eaten, treated as advised above, and in a couple of years they were as healthy as ever. Cut portions may be dressed with cow dung; but provided the cuts are made with a sharp knife, and left quite smooth, young clean bark begins very shortly to cover the wounds, a sure indication that the canker has been destroyed locally.

Selections.

Nothing is easier than to write down the names of a first-rate selection of Apples; yet it is a curious fact that some individuals would be almost certain to prove of little value

in most gardens. Those with only a limited experience may accept it as a good working precept, to choose a fair number each of tried sorts, noting that early sorts, such as Lord Grosvenor, Ecklinville, Lord Suffield, Ringer, Grenadier, Keswick Codlin, and others come into use so near to each other that the inclusion of each of these in quantity is wasteful. With regard to late varieties, it is commendable to choose sorts that may be eaten uncooked, a good example being Blenheim Orange, which is valuable alike cooked or raw. All good dessert Apples are of value cooked, while it cannot be said that all good culinary Apples are good for dessert. It is also most important that certain peculiarities of taste should be catered for. Some people are very fond of small Apples, such as Golden Pippin, Beachamwell, and others, while large, soft fruits, even when somewhat acid, suit other palates. There are also tastes to be consulted in cooking Apples. Some are fond of the acidulous Ecklinville and Mère de Ménagé; others choose more sugary pulps. And, of course, even in the case of an Apple otherwise good, its quality, when cooked, must be considered. From this point of view Alfriston cannot compete in late spring with Northern Greening or with Bramley's Seedling.—R. P. BROTHERSTON.

Wild Plants of Old English Gardens.

Recent lists of garden flowers do not mention some North American species of *Bartsia*, which used to be grown, but were found difficult of culture, perhaps not attractive either. Loudon adds that a native species thrives in sandy soil. This, I presume, was the annual red *Bartsia*, *B. odontites*, the whole plant having a reddish tinge, its spike one-sided, rose-coloured, and lilac. From its being also called Red Eyebright we may infer that at some time it was used for the eyes. The scarce yellow *Bartsia* is slightly fragrant, and resembles the garden Musk. But the true Eyebright of Britain is the *Euphrasia officinalis*. Under favourable circumstances it produces an abundance of variegated flowers, hence, though of lowly growth, it was admitted into gardens. Or was it sometimes cultivated because of its high repute as a remedy for diseases of the eyes, arising, so 'tis said, from a pupil-like appearance in the centre of the flowers? Yet we have it on good evidence that persons have found the Eyebright beneficial in form of lotion, and, were the poet Thomson right, that it dispels mists from "the mirror of the mind," many of us would be glad to give it a trial. Another poet calls the Germander Speedwell by this name too, and country children know it as Bird's-Eye or Cat's-Eye, these being suggested by its appearance. Heart-Oak Veronica is yet another name for the species not frequently used. Of our native Speedwells, *V. Chamædryas* is specially deserving of a place in gardens; one of its peculiarities is that hairs are arranged down the stem in two opposite lines, having spaces between. As Mr. Robinson remarks, we grow many exotics far less worthy of a position along borders, or on rockwork. During May it is, most years, that the sapphire flowers make chief show, but a succession usually comes out; their fragile nature, unfortunately, excludes them from bouquets.

Uninvited, the Ivy-leaved Speedwell (*V. hederifolia*) springs up on neglected garden patches, opening its small lilac flowers in April, or even earlier, and seldom noticed. The wall species grow on old walls as a shrubby plant about 2in high. Other species come up garden weeds, but the scarce *Veronica spicata*, a plant of cliffs and dry pastures, with deep blue flowers in dense spikes, 8 to 12in high, has been grown along borders. Two varieties exist, one having variegated leaves, the other white flowers. Upon an old list of cultivated plants I find recorded the Brooklime, *V. Beccabunga*, which must have been grown in some moist spot, scarcely for its beauty, we should think, though its tiny blossoms are of brilliant blue. Its odd specific name comes from "bech," a stream, and "pungen," alluding to the pungency of its leaves, which are thick and succulent. Our good forefathers mixed up with their spring salad things we should call decidedly nasty in flavour, but which they thought beneficial, and perhaps found them so. Hence the Brooklime may have been brought into gardens to have it ready for cutting, as it was eaten during spring.—J. R. S. C.



Cattleya X Browniæ, Veitch's Variety.

A First Class Certificate was accorded to this charming variety by the Orchid Committee at the meeting of the Royal Horticultural Society held on Tuesday, October 29. The parents of the hybrid are 'Cattleyas Harrisoniana and Bowringiana, both of them small-flowered species, yet in the latter case especially, the numbers of deep mauve-purple flowers produced is remarkable, as every grower is aware; and the question has been asked whether the exuberance which produces quantity of bloom has not been surprisingly toned down and concentrated for the production of larger and stouter flowers, though in fewer numbers. A glance at our illustration of the newly certificated variety will show the great breadth and stout build of the sepals and petals. It is a very distinct and very beautiful acquisition, the colour being deep rosy-peach, the centre of the lip orange, with an outer band of rich crimson-purple to add greater effect.

Paphinia grandiflora.

In the rush for novelties many of the charming older species are in danger of being forgotten. *Paphinia grandiflora*, or *P. grandis* as it is better known, has long been in cultivation (about a quarter of a century), and is a very fine Orchid, but it is rarely seen in anything like good condition. The flowers are 6 inches and upwards across, the sepals and petals creamy white, heavily blotched with chocolate purple, the lip of a deeper purple tint with a whitish disc, the centre lobe being divided into two sickle-shaped processes, and terminated by a tuft of yellow hairs.

The worst trouble with *Paphinias* is keeping out their foes, they being singularly liable to insect attacks; but this done, and the roots given clean new compost about once in two years, they will usually be satisfactory. Like their near relatives the *Lycastes*, they enjoy a good sound compost, but not too much of it; and plenty of water, both at the roots and overhead, in summer. Even in winter they must not be entirely dried off. *P. grandiflora* comes from Brazil, and was one of the discoveries of the Brazilian botanist Rodriguez.

Oncidium hastatum.

There are too many of the small-flowered section of *Oncidium* for one to grow anything like a complete collection, but this is a pretty and very distinct species, that may with advantage be included. Its habitat is on the Mexican coast, where it is said to be very abundant, but probably very few plants of it are imported. The pseudo-bulbs are about 3 inches high only, but they produce large branching panicles of bright yellow and brown flowers in profusion.

Its culture is not difficult in a house that suits it. In a close or stuffy atmosphere it seldom flowers with freedom; but when the plants get ample sunlight, with an abundant supply of fresh air, they will give little trouble. Equal parts of peat, fibre, and moss over good drainage suits it well, and the pots should be large enough to allow a margin of about an inch all round the plants. It does not need a long dry rest, but in winter, when growth is inactive, very little water suffices. When growing freely few species require more. *O. hastatum* was introduced by Messrs. Loddiges in 1837.

Pleione lagenaria.

This is usually the first to flower of the Indian Crocuses, as they are popularly known; it is also one of the best growers, and never fails to flower freely. I noticed some very pretty plants during the

week growing in hanging baskets, with small Ferns dibbled in the compost. These had grown up and formed a fine setting for the flowers, the lack of foliage at flowering time being a drawback to these pretty Orchids. The plan is not exactly new, but it is worth copying; the only thing to guard against is moistening the compost too much—in the interest of the Ferns—at a time when the Orchid roots do not need water.—H. R. R.

Some Ornamental Plants.

Oncidium ornithorhynchum.

Many Orchid houses will now be, or were lately, brightened by the presence of flowering plants of this species. To the numerous lilac blossoms is added the charm of Heliotrope fragrance. Although the flower spikes do not reach the height of those of the allied *Oncidium incurvum*, yet it must be ranked equal. It thrives in an intermediate house.

Bog Plants.

Planters of bog and water garden who are anxious to procure the newest Water Lilies in the latest colours will not forget to secure suitable plants to fringe the banks. We do not need to go far for

such subjects, for within our sea-girt isle there is a wealth of aquatic vegetation, both large and small, but chiefly of the latter kind. Some of our water plants form masses, the scenic effect of which is both bold and beautiful. Others again need to be much in the foreground, so that the eye may closely examine their points of interest. Among those of stately stature the *Typhas* are unequalled. Like most grassy leaved plants, they are very effective when grouped in isolated masses. Between the two British species there is but little to choose. *Typha latifolia* has dark brown flowers, whilst *T. angustifolia* is a smaller plant, with spikes of a lighter brown colour. Quiet in tone and graceful in contour, these so-called Bull-rushes form elegant backgrounds for waters on which the brightest Water Lilies, gilt with summer sunshine, flourish.

Bulbs.

The bustle of the bulb season is now past, and enthusiasts in bulbs have

little to interest them now beyond planting late stocks for another year's display in the garden. Yet there are a few bulbous plants that would almost make us believe that spring is at hand. There are the *Colchicums* and the autumn-flowering *Crocuses*, now all but past. The flowers grow with almost Mushroom rapidity, as if anxious to expand before frost hardens soil and arrests growth. The commonest is *Colchicum autumnale*; the very best is *C. speciosum*, with fine purplish flowers, nearly 5 inches across when fully expanded. The former is a British plant, though it is a somewhat local one. I remember a field, or rather a meadow, which owed its autumn purple colour to the numerous flowers of this bulb among the grass. This was in the east of England, in a rather low-lying locality, where other choice subjects, such as the Lily of the Valley and the *Fritillarias*, congregated. Of course they were not left in peace, for some thought *Fritillaria meleagris* prettier in their gardens than in wild solitude. It is to this class of people that we owe the increasing scarcity of some of the most interesting native plants.

Colchicum autumnale was, however, not attacked; its presence in such quantities was due to the bulbs being quite 9 inches beneath the grass. Yet if the roots are taken out of the soil after the leaves have died off they will often flower profusely in their dried condition, and returned to the ground in late autumn will develop their leaves much as usual. In addition to a large variety of *Colchicums*, there are several autumn-flowering *Crocuses*, which are every whit as good as those flowering on the other side of the New Year. *Crocus speciosus* is the finest; it is a good purple, striped with deeper shades, and a succession of flowers appear for several weeks.—DAVID S. FISH.



CATTELEYA X BROWNIÆ, VEITCH'S VARIETY.



Brussels Sprout Solidity.

We have had several opportunities recently of examining and comparing with other good varieties this excellent Brussels Sprout, and in our opinion it is far ahead of anything we have seen. It was raised by a well-known and very successful Scottish grower and exhibitor of vegetables, and distributed last spring, and from what we have seen of it ourselves, and also from the many satisfactory reports from those who have grown it, we confidently predict a great future for it. It is dwarf in habit, not exceeding 2ft, and the stem is literally crowded to the base with beautiful sprouts about the size of a golf ball, and almost as firm. The flavour is excellent, and the constitution essentially Scottish, that is, hardy. We may add that the entire stock of seed of this most desirable sprout is held by Messrs. Alexander and Brown, seedsmen, New Scott Street, Perth.—ALBYN.

Interesting Notes on Seed Sowing.

It may seem to many of my fellow gardeners a matter of impertinence on my part to dictate to them when and how to sow their seeds. I am not going to do so, for the simple reason I do not want a nest of hornets about my head. But I venture to think that many failures take place through want of a little thoughtful judgment as to the condition of the soil and atmosphere. Many gardeners have a set time for sowing the seeds of each particular vegetable, let the soil and weather be what they may, the result being that if the soil is very wet or very dry at the time, his seed fails to germinate, and then woe betide the seedsman, who is invariably blamed for sending him old seeds. Now, every respectable seedsman tests the growth of all his seeds before they are sent out, and I maintain that no firm will risk its reputation by sending clients any seed that does not yield a high percentage with power to germinate. Let us not blame our seedsman too severely, but just think if we are not ourselves very much to blame for not using a little common sense in regard to the time of sowing and the state of the soil. For instance, a case came under my notice of a gardener who sowed White Spanish Onion in the early part of February, when the ground was wet and cold. His seed failed to sprout, and he stormed his seedsman for sending him old seed. Such a mistake he never made before, for the trial book of the seedsman showed that this very Onion germinated on an average 70 per cent. Had he sown it a few weeks later he would have found his White Spanish Onions fully up to the standard, as was proved by his next door neighbour, who had the identical same stock, but who had taken the precaution to sow when the atmospheric conditions were more congenial.

Then, again, the roller is not used so often as it should be. If the ground is dry and powdery, a good rolling or beating down with the spade is absolutely essential. [Is not close treading best? —Ed.] The dry winds cannot then reach the dormant seed to shrivel it. Of course, if the ground is moist, this is not required to such an extent; but firming the soil is always more or less beneficial. If the seed bed is rolled the young plants will come straighter and stronger; and then, again, if the rolling of the seed bed is essential for the seed it must be more so in the case of young seedlings, whose roots are so sensitive. Spinach seed is often bad to germinate, for the very reason that it is often sown when the ground is dry and hot. This, too, can be avoided by rolling the soil after sowing. Beet, Carrot, Turnip, Lettuce, Onion, and Parsnip is best sown, I think, from the end of February till the end of April. Seeds sown in March (the middle of third week) have the warm showers of April before them, which is, of course, much to their advantage. Most seeds will retain their germinating powers for two years, and some for three, five, or ten years. Such as Peas, Beans, Carrot, Salsafy, Sage, and Thyme are good for two years; Chicory (Endive), Lettuce, Spinach, Radish, and Parsley for three years; while Cauliflower, Cabbage, Celery, and Turnip are quite good for five years. Beet, Melon, Cucumber, and Tomato seeds will hold good for six to ten years, presuming it to be properly kept, and not too dry or damp. Nothing is gained by sowing too soon. March and April are the busiest months of the year for the gardener. It perhaps forwards the work if done in March, but to my mind April is undoubtedly the best month for sowing. But, above all, we must study the weather to a very great extent if we are to expect good results, for if our seeds start strong, our crops will, in turn, be good.

Some recommend soaking seeds to hasten their germination,

but surely this practice is worse than useless, for it often weakens the growth to such an extent that the crop turns out puny and poor. If we have our beds properly prepared and we sow at the proper time, when the weather is favourable, I think we can safely rely on Nature to do the rest. We do our own part in keeping down weeds, and thus allow our plants to have full freedom, whence they will yield their harvest in their own good time. I once heard a very practical gardener say that if we studied natural laws more than we do we should most certainly be better gardeners, and no one can say he is not right. We are nowadays too much inclined to sow our Onions "to-day," because we did it on the same day last year. Our English climate is too changeable for this, and we cannot follow so strict a routine, but must just rely on Mr. Weather to give us favourable days for getting in our crops.—H. KITLEY.

Gardeners and Estate Agents.

A great deal of truth is advanced in the excellent letter by "Onward" on page 416, in regard to the relations existing on so many estates between the gardener and estate agent. There is no doubt but that the agent is a great power in controlling the destinies of many good gardens, often thwarting useful improvements that could be conducted by the gardener, and even the necessary repair and upkeep of buildings; but many agents turn a deaf ear to one, though an able and responsible servant, when appealed to for the necessary means of conducting a garden economically, and with satisfaction to all concerned. The garden is too often treated as an extremely minor part of the estate when it comes under the indirect control of the agent, and when this feeling is fostered, there is sure to be "debating lectures" between the two at different periods of the year. It would be well for many gardeners, if it were possible such an existing state of things could be brought before the actual owners and employers, but so it is, there is often no "court of appeal" for the gardener to plead before, and he has to endure the "arrogance" and make the best of the situation. There are many little things connected with a garden that can be made pleasant, or the opposite, if agent and gardener are not on good terms, and the influence of these little things cannot be measured by the smallness of the item at the outset, but by the results expected to be developed out of them.

That the agricultural depression which has existed now for so long a time has contributed to these troubles by the engagement of younger and less experienced agents, seems an undisputed fact, but the love of flowers, fresh fruit, and such like, even in landed estates, is such that employers and gardeners now are brought into closer touch than once obtained, and let us hope this closer touch will make the means of supply and demand better understood, and the influence of disinterested persons of lesser value. Personally I am under the submission of an agent only to a small extent, the "middleman" not being given any opportunity of coming between master and servant. But it was not always so. Time was when even a threepenny article could not be had of any sort or kind without the officially signed order. One item that affects the garden almost, if not quite as much as anything, is soil for potting, making new or renovating borders for indoor fruits. Now, I find there is often a good deal of unnecessary senseless debate against the acquirement of suitable soil for these purposes. And what can a man do without it? There is so frequently a prejudice against the cutting of turf both with farmers and agents, and the item is one that does not strike the disinterested as being of any or but little importance, and on large landed estates the purchase of soil is a question that does not appeal to the owners with any practical force, nor is the cost an agreeable item. There is much land that might be thinly peeled and sown with good seed and positively become the better in every way, but there are persons who will not see, nor admit the truth of such an argument. I have had to procure soil from the bye-lanes and such places for the annual potting heap, although surrounded by several hundred acres of pasture land, simply because the agent was no gardener, nor understood the necessities of one.

It would be well if there were some influential advocates that could appeal for the "other side" in cases such as those instanced by "Onward," but I fear, unless the gardener is given the means of dealing directly with employers, agents will hold sway and make thorny paths for gardeners to walk upon. It is not right nor just for an experienced gardener to be controlled in the conduct of his charge by one absolutely ignorant of the department and its needs. It may be, and is, no doubt, necessary, that someone should safeguard the financial part of the estates business, but on this alone should hang the responsibilities of the agent as affecting the garden. There is a great disadvantage, and often loss of economy in so restricting the freedom and resource of a gardener, one, at least, that has his employer's interests at heart, and is anxious to produce the best crops of each season with a minimum of expense. It is plainly apparent that "Onward" has had an experience by no means desirable in the

conduct of gardens under the reign of officious agents, or he would never have found so many unfavourable charges to bring forward. At the same time, all who have had a lengthened experience in large gardens will have found some one or the other grievances apply with more or less truth.

From an agent's point of view the garden shows only a loss account, the expenditure bringing him no return; they lose sight of the fact that the garden ranks next in importance to the mansion in the home surroundings. I find there is much more pleasure in the up-keep of farm buildings than in the ease at home, but I could never see the logic of neglecting the home to benefit others. Selfishness is not a desirable ruling spirit, but there is an inherited desire on the part of most persons, whether they be rich or poor, to look to their home and its welfare as the first and foremost duty. It often happens that agents form a sort of go-between on estates that are not wealthy, and the credit of the unkept garden, instead of reflecting, as it should, on the agent, falls on the gardener's shoulders. There is no gainsaying the fact that a large garden makes frequent demand on the resources of the estate office, and the repetition of these demands being focused, so to speak, on one department, makes it appear a much greater item of expense and labour than is actually the case. On the other hand, if repairs, &c., are kept well ahead year by year the cost is less, friction is saved, and credit redounds on everyone to whom it is due. It behoves every gardener to work in the pleasantest harmony possible with the agent, any aggressiveness of manner displayed is sure to meet rebuff.

There is nowadays a regrettable circumstance that render it necessary for many large mansions to be let for varying terms to paying tenants. Here, again, the gardener and agent is brought into touch even more closely than with the owner himself, because, when a reasonable, or perhaps an excessive rent is paid, a tenant naturally expects the most he can get for the outlay. The scriptural phrase applies here with good force. "No man can please two masters." The aim of one is to get the best of the bargain he has invested in, the agent will do the same for the benefit of the estate, and who can blame either? It requires some little grace on the gardener's part to adjust matters amicably between the two, and instances could, no doubt, be related often where the men so placed has anything between, or even the extremes of, the thorn path and Rose bed to walk or rest upon. The maxim—give and take—is the one that is applicable to a marked degree to such instances, and requires a good deal of judgment to effect the happy medium.—S. R. A.

Indoor Fruit Culture.

(Concluded from page 404.)

Peaches and Nectarines cannot be considered separately, being practically the same species, while their cultural requirements are identical. Like all stone fruits, they delight in a soil containing abundance of lime, and unless this is present naturally it must be added in the form of old lime rubble or slaked lime. The rubble is preferable, as it acts in the double capacity of a fertiliser to the soil, and a mechanical agent in keeping it open; while the newly slaked lime has a tendency to fine the soil down, which is undesirable.

In planting a house of Peaches and Nectarines, a number of gardeners would use nothing but small maiden trees. These are, of course, excellent for the purpose, but they are not the only suitable kind, by any means. If planted as mentioned above, just as the foliage is turning, large specimen trees may be safely used, and with care will carry a light crop the first season. But besides the advantage of an early crop, these trees are less likely to run away to strong wood than are small maidens cut hard back. The weight of the crop must, in a manner, be governed by the strength of the trees, and when cropped moderately and judiciously they soon settle down into a regular routine. The advocates of hard pruning object to this system of planting, as they say the upper buds are apt to start weakly. But their argument will only hold good with very inexperienced growers.

Pruning.

There are few, I venture to hope, who would not be able to tell by the look of a bud at the time of disbudding whether it would break into a healthy, vigorous shoot, or the reverse, and by rubbing out the weak ones, and reducing the number of strong ones, a more regularly balanced tree is produced. Of course, this system will not do for careless or unskilful planters. Every point must be watched, and the wants of

the trees anticipated; those who are not prepared to do this must be content to continue planting maidens, and wait for fruit until these have gone through the usual ordeal of training, and often root-pruning, to bring them into a fruitful state. It may be objected that over-sized specimens are often expensive and difficult to obtain; but by purchasing a year or two in advance of requirements, and growing the trees on at home, this is overcome, and you have the advantage of the trees being at hand, so that the exact time for planting may be chosen, and the trees are out of the soil for a few minutes only. In most gardens there are spaces on the walls under rider trees that may be profitably occupied by young trees of this description, which, beside being useful for planting new houses, will also go a long way towards filling the place of old or worn out specimens when these fail.

Skilful Disbudding.

Peaches and Nectarines are often—I might say usually—much too crowded on the trellis, this being the result of unskilful disbudding. To disbud a tree properly is an important detail of culture, and I can recommend all young gardeners to give it their careful study. The appearance of the tree is the safest guide as to how to proceed. Usually, some part of it has stronger buds than the others, and this part ought to have attention first. Beginning at the bottom of the last year's wood, take care to select two strong shoots, one on either side, rubbing out the next few eyes, excepting when fruit has set, and always leaving a sound, strong eye at the top of the wood, to ensure the proper swelling of this fruit. After a week has passed, as the trees grow rapidly at this stage, it will be necessary to again go over them, this time pinching the growths that spring from the base of the selected fruits, and also any foreright shoots that appear to be taking an undue share of the energies of the tree.

Heeling-in (as it is termed) of the selected basal shoots is also necessary, but the time for this must be carefully studied. If tied in too early, there will often be a bend at the point where the raffia comes in contact with the shoot; while if left too late, they are difficult to get into place. The raffia should always be used flat, never twisted, for this purpose, as it is not so likely to cut into the young wood. And another point that should be avoided in Peach tying, though this applies more particularly to the winter tying, is the wrapping of a twisted stroud of matting round the point of the shoot, and straining this to the next cross wire. It gives the tree a smart and tidy appearance, but the matting "grows into the shoot," to use a common phrase, crippling it as soon as it begins to swell. When the shoots are once selected and in place, their after treatment is very simple. All sub-lateral shoots must be pinched out, and the main shoots themselves pinched when they have filled their allotted space.

Fruit Thinning.

Thinning of the fruit will be necessary as soon as the flowers have fallen, and the embryo fruits can be distinctly seen. Some advise thinning the flower buds; but I could never see that any good came of it, while in a dull season the lessened amount of pollen must be against a good set of fruit. The second thinning should take place when the fruit is about the size of marbles. This should be followed by a third after stoning has taken place, but it is not wise to leave very much until then, as the formation of the stone takes far more out of the tree than the flesh; besides this, I have always found there is a slight check to the tree when heavy thinning after stoning is practised.

Heavy cropping is always best avoided. Even on young vigorous trees it is harmful, and it is much worse for weak or old ones. Nothing is more likely to lead to bud-dropping in spring, especially if, as often is the case, the trees are neglected after the fruit is taken from them. To allow the trees to carry too heavy a crop, and then to throw the house open, and expose the border to the full sun and air, without a thought as to moisture at the roots, is about on a par with making a man do a hard day's work and depriving him of his supper and bed. Growers of good fruit will find the greatest advantage accrue from throwing the house open; it ripens or consolidates the wood, and is distasteful to insects, but plenty of moisture at the roots and over the leaves until they fall must be allowed, especially when the trees are forced early. Even in winter the borders are often let dry too much, and a thorough soaking of water in autumn, and again in winter, will go far to check bud-dropping and its attendant evils.—H. R. R.

Evergreen Trees and Shrubs.

Camellia japonica is hardier than many people imagine; many of the varieties flower well out of doors. They should have a place where the early morning sun will not catch the flowers, for in the event of a frosty night a gradual thawing is necessary. *Choisya ternata* makes a handsome plant, its glossy ternate leaves and fragrant white flowers being effective. It should not be planted in cold situations. *Cistus laurifolius*, in addition to making a distinct change among evergreen shrubs during winter, produces an abundant supply of flowers in early summer.

Cotoneaster buxifolia, *microphylla*, *rotundifolia*, *thymifolia*, and *Simonsii* are all useful plants, while *Crataegus pyracantha* and its varieties are invaluable for a wall. In the southern counties the *Escallonias* are all excellent subjects, many of them bearing lovely flowers. *Euonymus japonicus* and *E. radicans* are both useful. *Daphne laurcola* and *pontica*, where they do well, are effective, while *Daphniphyllum macropodum* is one of the most distinct of the rarer subjects. It makes a large bush, something after the style of a garden *Rhododendron*. *Elæagnus angustifolia*, *argentea*, *macrophylla*, *glabra*, *pungens*, and *umbellata* are all good subjects, and make large bushes; the variegated varieties of *E. glabra* and *pungens* are very striking. *Phillyræa decora* is one of the best and most useful of evergreen shrubs, while *P. angustifolia*, *latifolia*, and *media* are useful.

Where peat-loving plants thrive a wider selection can be made, the majority of which are good flowering subjects. The numerous species of *Erica* are welcome everywhere, one or more species being in flower the whole year round. The evergreen section of *Rhododendron*, particularly the dwarf ones, represented by such species and varieties as *campylocarpum*, *cinnabarinum*, *ferrugineum*, *hirsutum*, *indicum*, *intermedium*, *myrtifolium*, *præcox*, *Smirnowii*, &c.

Mention need only be made of the various species of *Arbutus*. *Andromeda*, *Kalmia*, *Arctostaphylos*, *Ledum*, *Pieris*, *Menziesia*, *Pernettya*, *Bruckenthalia spiculifolia*, *Daboëcia polifolia*, *Calluna vulgaris*, &c., to show what a wealth of material is contained in the order *Ericaceæ*. With all these subjects at hand, it ought not to be a difficult matter to introduce into our gardens a greater variety of evergreen shrubs than exists at the present time.—WM. DALLIMORE.

Ornamental Crab Trees.

Crab trees are, as a rule, more ornamental than useful, hence they are not much grown, but they might usefully be employed in the place of much less desirable trees, as twice during the season they are capable of presenting a picture—in spring with their flowers, and in autumn the show of fruit. Another excellent characteristic of Crabs is that they grow into good shapely trees, with a minimum of attention, if this is only given at the right period—namely, when the trees are young. In a fair-sized orchard a few Crabs planted amongst the other occupants will give variety and interest. Flowering as they do freely in spring, Crabs also form handsome objects dotted at intervals in a belt of shrubs. Towards autumn, when the fruit is putting on its colour and hangs in rich profusion, the trees are most picturesque and interesting. Amongst the best varieties are the scarlet Siberian Crab, or Cherry Apple. This is a very prolific variety, and forms a handsome sight in years when the clusters of fruit are freely produced. The colour of the fruit is a rich, dull scarlet. It ripens in October, and is excellent for jelly. When thoroughly ripe it is very nice to eat, being of a sub-acid taste. John Downie is also a fine Crab, very prolific with its orange-scarlet fruit, cone shaped, and borne in clusters. It is a handsome dessert kind, and useful for preserving.

The Dartmouth Crab is another excellent variety, with purple-crimson fruits of a large size. The varieties Mammoth and Transparent are yellow fruited. The whole of these are worthy of cultivation. The best form of cultivation is to grow them as standard trees. Plant them in good soil, and give them ample head room, where they can develop into shapely specimens. If they show a tendency to rush

away in growth subdue their vigour by lifting the trees and replanting. Severe pruning must not be adopted, but a judicious thinning of the growths will be a distinct advantage whenever it is seen they are becoming crowded.

There is another section of Crabs which are chiefly valuable for spring flowers only. These comprise *floribunda*, *floribunda atro-purpurea*, and *floribunda Halleana*. This latter variety has dark bronzy foliage. A variety with large double flowers, scented, is *angustifolia*; and *spectabilis* semi-double, is a lovely sort, but is, I think, eclipsed by *spectabilis Schideckeri*, double, dark crimson. These, of course, are more adapted for the pleasure ground, taking a prominent place among shrubs and spring-flowering trees.—E. D. S.

Gardening Instruction.

The tenth report on the Gardening Instruction carried out by the Worcestershire County Council has been issued. "It is just ten years since, as the result of a grant of £100 from the Technical Instruction Fund of the County Council, the Council of the Union secured the services of Mr. James Udale as gardening instructor. There has been a great development in several directions since that time; and the sum entrusted to the union for 1901-2 is nearly seven times as much as the grant of 1891. The instructors, Mr. Udale and Mr. Lansdell, continue to visit all parts of the county. The work of inspecting the allotment gardens generally has increased in popularity, and the confidence of all classes of cultivators has been steadily gained. Enquiries upon all sorts of difficulties connected with horticulture are continually being received, causing a considerable growth in correspondence." A special report upon the Experimental Garden is issued early in each year, and is widely circulated. The number of visitors to the garden continues to increase; and the display of fruit of a large number of kinds has been of especial interest this summer. "Five new County Instruction Gardens were established in the spring of 1901, at Halesowen, Hasbury, Old Swinford, Selly Oak, and St. Stephen's, Worcester, making a total of fourteen centres in all, with 198 pupils. All the new ones, except Old Swinford, were late in starting operations; but they made rapid progress, St. Stephen's and Halesowen making a good fight with some of the longer established gardens for first place. If the quality alone of the crops was taken as the basis of classification, St. Stephen's, Worcester, would be first in the county; but as each crop must be valued and receive its number of marks, the place goes to the instructor who has the greatest variety of crops on the ground. Stoke Works occupies first position; having eighteen different kinds of vegetables, and full marks for cleanliness on each of the sixteen plots. St. Stephen's, Worcester, is second with twelve varieties of vegetables, and also with full marks for cleanliness. Aston Fields is third, having fourteen different kinds of vegetables, but only five plots obtained full marks for cleanliness. Great credit is due to Mr. Williams at Stoke Works for producing from a difficult soil such excellent results; also to Mr. Evans for the splendid and well arranged crops produced in a short time at St. Stephen's; a word of praise is also due to Mr. Barber for his very good work at Halesowen. The best crops, irrespective of number of kinds, were found at St. Stephen's, Worcester, Halesowen, Hagley, and Aston Fields, in the order named."

The following table shows the place, in order of merit, of each centre fixed by the average marks of the pupils:—

No. of Boys.	Centre.	Average Marks.	Teacher.
16	Stoke Works	73	T. C. Williams, schoolmaster.
15	St Stephen's, Worcester	70	A. Evans, gardener.
16	Aston Fields	70	J. Drew, gardener.
5	Alvechurch	63	T. Wilkinson, gardener.
14	Hagley	62	J. Heywood, schoolmaster.
16	Halesowen	61	W. T. Barber, gardener.
16	Droitwich	59	G. Joyner, gardener.
13	Old Swinford	58	J. Sutton, schoolmaster.
16	Glent	56	W. F. Smith, market gardener.
14	Bournville (senr.)	48	Miss G. Cope, head gardener.
10	Liekey End	48	H. J. Drewitt, schoolmaster.
16	Hasbury	45	J. Clarke, gardener.
15	Bournville (junr.)	39	J. Bodycote, gardener.
16	Selly Oak	29	E. Sadler, gardener.

The boy obtaining highest place in the county is J. Wentworth, Aston Fields, 94 marks; and he will be the recipient of a watch. The next few in order of merit are S. Pitt, Aston Fields, 85; W. Day, Hagley, 84; B. Harper, 84, and J. Hodges, 82, of Stoke Works; G. Day, 82, H. Newman, 81, and G. Tolley, 80, Droitwich; C. Hobday, Aston Fields, 80.

A fuller report on these gardens will be issued with the Experimental Garden Report.

Fruit-growing in the Channel Islands.

On November 6 there was a fairly large attendance at the meeting of the Devon and Exeter Gardeners' Association to hear a paper prepared by Mr. F. J. Fletcher, of Guernsey, on "Fruit Growing in the Channel Islands for the English Market." The chair was taken by Mr. W. Charley, of Wotton House Gardens. The paper was read by Mr. Harry Vodden, of Jadoo, Limited, who spends a considerable portion of the year among the market gardeners of Guernsey and Jersey. He mentioned incidentally that one of the large growers in Jersey has this year harvested a very heavy and profitable crop of the Tomato Flying Dutchman from seed he had from Messrs. Veitch, of Exeter. Mr. Fletcher, in his paper, said the best quality of Guernsey produce was equal to the best English, for which it was often sold in the

scribed the gathering, packing, and despatching of Tomatoes to England, and expressed the opinion, that Tomato growing was not so profitable in the island as in years gone by. But there were some croakers, kid-glove growers—young gentlemen from England—whom he could not pity.

The growing of Grapes in Guernsey was almost as important as Tomato-growing, and, on the whole, growers were very successful with their fruit. Unfortunately, there was no record of the weight of Grapes exported, but he would be putting it at a low estimate if he said over 1,000 tons were exported annually. The climate and soil seemed to suit the Vine almost to perfection, and the crops were grown with far less labour than English gardeners would think possible. The Guernsey Grapes were good in flavour, but somewhat smaller than the English ones. The flavour was accounted for by the fact that the Vines get much more sunshine than the English, though grown in a poorer soil. The size was greatly influenced by the weight of crops allowed to each Vine. At



A GROUP OF SMITH'S CLEMATIS.

shops, though the ordinary quality of Guernsey fruit was not quite up to the standard of the ordinary English. In Guernsey ordinary Tomatoes they did not get the full flavour of the home-grown, while in Guernsey Grapes they got more sugar, but the size was smaller. In his opinion (reports the "Exeter Gazette") every advantage, barring that of climate, was in favour of the English grower and against the Guernsey grower, the chief of many advantages being that England was full of trained and practical gardeners, though the Guernsey gardeners were an industrious class.

As an instance of the growing industry in Guernsey he mentioned that in July last 630 tons of Tomatoes were despatched to England in one week, and during the past six months 7,000 tons had been transmitted. The season's crop was probably worth nearly a quarter of a million of money. In Guernsey the only fruits grown in quantity were Tomatoes, Grapes, and Melons. Figs were fairly plentiful, but there was not much demand for them in England. Mr. Fletcher went on to explain minutely methods employed in the production of the Tomato. The great difficulty experienced was that of the unfavourable soil. He further de-

one time stone fruits flourished in Guernsey, but to-day they were scarce. Peach culture under glass was spreading, and in favourable localities was likely to pay well; but in other localities the trees refused to thrive. Strawberries did well in sheltered localities, but were grown only in sufficient quantities to supply local demand.

Trained Clematis.

The accompanying illustration of balloon-trained pot Clematis depicts the exhibit staged by Messrs. Richard Smith and Co., of Worcester, at the Royal Horticultural Society's Show, held in the Inner Temple Gardens, last May. It gives a capital idea of the floriferousness of the plants, and shows the possibilities of the Jackmanni section of the genus for decorative purposes. We cannot commend the formal method of training, but would suggest using the plants for trellises indoors, and to be informally supported on light wire frames or stakes. The varieties composing the group were:—Marie Lefebvre, Madame Van Houtte, Sensation, Glory St. Julian, Beauty of Worcester, Mrs. G. Jackman, Nellie Moser, Excelsior, and Fairy.

NOTES & NOTICES

Lord Llangattock's Fruit at Cardiff Show.

His lordship, so well known and highly respected everywhere, staged a magnificent collection of thirty-eight dishes of Apples at the Cardiff Chrysanthemum Show on November 5 and 6. We understand that by Lord Llangattock's directions this display of fruit was sent to the Cardiff Infirmary for the use of the patients.

More Primroses.

Additional bunches of these sweet and pale-faced wildings have come to this office from Mrs. M. H. Hooking, The Gardens, Oldown House, Tockington, Gloucestershire. The letter with it states that the Primroses were gathered by the son of our correspondent on his way from school, and others could still be gathered.

Royal Meteorological Society.

At the ordinary meeting of the society, to be held, by kind permission of the Council, at the Institution of Civil Engineers, Great George Street, Westminster, S.W., on Wednesday, the 20th inst, at 7.30 p.m., the following papers will be read:—"The Exploration of the Atmosphere at Sea by Means of Kites," by A. Lawrence Rotch, M.A., F.R.Met.Soc.; "Meteorological Phenomena in relation to the changes in the Vertical," by Prof. John Milne, F.R.S.

Award for Dried Fruit.

We are enlightened by Mr. James Udale on the point that in our report of the dried fruit and vegetables exhibition by him from the County Experimental Gardens, Droitwich, at the Drill Hall, on October 29, we omitted to mention that a Silver-Knightian Medal was awarded. We always copy from the official list, and in the sheet handed to us there was no reference to this award. Mr. Udale adds that all are well satisfied with result of the experiments in Plum drying carried out for the County Council.

The Jamaica Fruit Trade.

The leading growers and merchants of Kingston (Jamaica) held an important conference on Wednesday, October 31, the Governor of Jamaica presiding, to consider the best means of improving shipments of Oranges to America and Great Britain. The general opinion favoured a thorough inspection of fruit by experts before shipment in order to ensure that only suitable fruit is sent.

School of Gardening for Women.

Another gardening school, a practical school, with classes for instruction in the principles of horticulture, botany, horticultural chemistry, and physics, together with book-keeping, bee-keeping, and bouquet-making, has been established, this time in Scotland, the full address being, "School of Gardening for Women, Shiells Park Nursery, Inveresk, near Edinburgh." The Principals are Miss Barker and Miss Morison, both of whom were trained at Swanley Horticultural College, taking the diploma there after a two years' course. After leaving Swanley they worked as gardeners for two years at the Royal Botanic Garden, Edinburgh. They have also had experience in the management of private gardens, and for a period they have conducted a nursery business at Inveresk. The school is to be opened in January next, at the address we have given. Besides the class work, instruction will be given in the practice and theory of gardening, and students will be trained in the culture of plants under glass and in forcing-houses, and of flowers, fruit and vegetables in the open. Lectures on special subjects will be given by practical men. The course will extend to two years. The school has the great advantage of being attached to a large market garden, where the outdoor vegetable culture will be taught. Students will thus get an insight into the most modern methods of working a market garden through all the stages, from the preparation of the ground and the seed sowing to the packing of the produce for market. This garden, extending to 141 acres, is owned and worked by Mr. J. W. Scarlett, of Sweethope, Inveresk.

Plants for a Pergola.

Suitable pergola plants are *Periploca græca* and Honeysuckles, especially *Lonicera sempervirens*, the scarlet Trumpet Honeysuckle. Again we have the Golden Hop, Lime trees, *Wistaria sinensis*. *Rubus phœnicolasius*, *Berberidopsis corallina* (this succeeds best on the north side), *Polygonum sachaliense*, *P. baldschuanicum*, both very free growing climbers, though herbaceous in their habits; and fancy Gourds in variety. These latter appear to be coming very much to the fore. They certainly are ideal plants for this purpose; we have such a choice among the different species that it would be superfluous to detail them.—GEO. HAGON.

Spraying Potatoes.

An alarming and mysterious sickness, which has attacked a considerable number of people, is reported from the town of Portadown, County Armagh. The matter having been brought under the notice of the Town Council, Dr. Rowlett, Medical Officer of Health, has reported that the symptoms are those of copper poisoning, and the only theory he can advance is that the attack has resulted from the eating of Potatoes sprayed while growing with a sulphate of copper mixture, as recommended by the Irish Agricultural Board. It has been decided to forward to the Board samples of sprayed Potatoes and vegetables for analysis.

Addresses Wanted.

We are without the names and addresses of the secretaries of the following horticultural societies; any of our readers acquainted with the secretaries of one or other of the societies named, would greatly oblige the Editor of the Horticultural Directory by furnishing him with the names and addresses requested. The societies are:—Aberdeen Royal Horticultural, Acton Horticultural; Ebley, Caincross, and Selsby Horticultural; Hornsey Horticultural and Allotments Association; Newport (Mon.) and District Gardeners' Mutual Improvement Association; Sherborne Gardeners' Mutual Improvement; West Derby Gardeners' Mutual Improvement Society; Winchester Gardeners' Mutual Improvement Association; Astwood Bank Amateur Gardeners' Society; Barnsley and District Experimental School of Gardening; Chiswick Gardeners' Mutual Improvement Society; Irish Gardeners' Association; Isle of Wight Horticultural Improvement Association; Maidenhead Gardeners' Association.

Chrysanthemums in Liverpool.

During the next five or six weeks shows of Chrysanthemums will be held in the Botanic Gardens and Sefton Park. Supreme in their loveliness as have been the Liverpool municipal exhibitions of Chrysanthemums in years gone by, it is not using the language of idle exaggeration to venture the opinion that Mr. Henry Herbert, the chief Superintendent of the Liverpool parks and gardens, and Mr. James Guttridge, Curator and Deputy-Superintendent of Parks and gardens, have this year produced two displays of the historic Japanese flower which surpass anything of the kind ever seen in Liverpool. Each of the two exhibition houses—one in the Botanic Gardens and the other in Sefton Park—contains upwards of 1,500 plants of endless variety. What myriad blooms and radiant tints meet the eye upon entering the respective show houses, and what an atmosphere of graceful and variegated splendour there seems pervading all! A glance along the delightful floral vista and across the tops of the straight, tall, and stately plants, reveals the presence of many old favourite varieties, whilst here and there, lifting their proud and charming heads above the rest, stand several plants whose colour and shape proclaim to the accustomed visitor the fact of their first appearance under these auspices. The following list of the principal varieties to be seen may be of interest:—Chrysanthemiste Bruante, Ella Curtis, Etoile de Feu, Gabriel Debie, Henry Weeks, Hon. F. W. D. Smith, Kathleen Rogers, Lord Ludlow, Lucy Kendall, Madame Louis Remy, Mrs. Henry Chiesmann, Ma Perfection, Mrs. White Popham, Miss Randerson, Madame Ferlat, Hanwell Glory, Robert Powell, Sir H. Kitchener, Wm. Bardney, Robert Maher, Robert Moffatt, James Bidentope, Mr. T. Carrington, Florence Molyneux, Mrs. Barkley, Le Grand Dragon, Soleil d'Octobre, Australie, N.C.S. Jubilee, Mrs. Coomber, Jane Molyneux, Miss Nellie Pockett, Master H. Tucker, Oceana, Pride of Madford, Madame Edmond Roger, and C. H. Curtis. The exhibition will continue for five or six weeks, Sundays as well as week days.

A Fine Bunch of Bananas.

A bunch of Bananas (*Musa Cavendishi*) was cut by Mr. Jordan, at Impney, near Droitwich, the other day, weighing over 100lb. The fruits were very large, some weighing 7oz each. Mr. Jordan grew a bunch several years ago that weighed over 114lb, and was figured in the Journal. In the same garden is a magnificent display of *Begonia Gloire de Lorraine*. There are several hundreds of plants in full flower in a span-roofed house, and the mass of delicate pink colour presents a view of loveliness beyond description.—U.

Kew Bulletin.

The latest bulletin of miscellaneous information (Appendix I., 1902), just issued, is devoted to a list of seeds of hardy herbaceous annual and perennial plants and of hardy trees and shrubs which, for the most part, have ripened at Kew during the year 1901. The seeds are available for exchange with Colonial, Indian, and Foreign Botanic Gardens, as well as with regular correspondents of Kew.

Protection of Birds.

The Society for the Protection of Birds is this year offering two prizes, of £10 and £5 respectively, for papers on the best means of establishing a "Bird and Arbour Day" in England. In the schools of many of the United States, bird days and arbour days have become a very popular institution, and have proved most successful in interesting teachers and children in birds and bird-protection; and the society's offer will, it is hoped, elicit practical hints as to the way in which the scheme may be introduced and worked in English schools. Papers are to be sent in not later than November 30, 1901, and all particulars may be obtained of the Hon. Secretary, Society for the Protection of Birds, 3, Hanover Square, London, W. The essays on bird-protection which gained the society's prizes last year can also be had from the society's office.

Variorum

In the Rose, shrub, and fruit tree catalogue newly sent out by Messrs. Wm. Clibran and Son, of Altrincham, there is a beautiful coloured plate of their new Apple, "Rival," furnishing a representation worthy of being framed. * * In a letter from Mr. H. Pugh, Boxted Hall, Bury St. Edmunds, who also sends a fine flower of *Strelitzia reginæ*, he says of the plant: "It is a tuberous rooted plant, in this respect almost like a Dahlia; I grow it in peat, leaf soil, and loam, in a warm house." We had a note also, in names of plants. * * The fruits of the Strawberry Tree, *Arbutus Unedo*, have been received at Covent Garden from France, and they are, of course, quite a novelty. * * Before the members of the Sea Point Gardeners' Society at Cape Town, Mr. Peter Barr, V.M.H., recently delivered a lecture on "Ancient and Modern Daffodils." Mr. Barr had intended to stay at Perth in Western Australia for an extended period, but the veteran, who has now travelled America, Japan, New Zealand, and Australia, found the Cape too alluring. He intends to "do" the Cape to Cairo route.

Kew Notes.

Both the greenhouse (No. 4) and the Orchid ranges are at present exceedingly bright and attractive. The Chrysanthemums are at their best and are numerous. The octagons of the temperate house are relieved of their usual inviting presentment by a fine selection of the popular flower of the season. Besides Chrysanthemums, in the greenhouse there are some massive plants of the scarlet flowered *Salvia*, and the beautiful *Calceolaria Burbidgei*, batches of *Cyclamens*, *Primula obconica*, *Gomphrena globosa rubra* (a tasteful little annual), and *Zonals*. In the Cactus and succulent house there are two *Agaves* showing flower. One of these has not previously flowered at Kew; the other, *A. filifera filamentosa*, has been expanding its long, dense spike for a fortnight past. The Date Plum (*Diospyros Kaki*) is bearing ripe fruit in this house. The Japanese *Rhododendrons* in the Mexican house are flowering most successfully, and furnish one of the best indoor features of Kew at the present time. A considerable amount of planting is being done both outside and inside. It is proposed, we believe, to carry a pergola along the walk that runs north of the rock garden and south of the Orchid houses, and to have it covered with suitable *Roses*. The pergola will be of iron. Such an addition will be a remarkable improvement and will lend even greater charm than ever to these beautiful Royal Botanic Gardens.

United Horticultural Benefit and Provident Society.

The usual monthly meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. Thomas Winter in the chair. Three new members were elected and one other nominated. The secretary reported four members on the sick fund. The amount paid to sick members since the last meeting was £8 2s. The treasurer was authorised to invest £400 in the best available trustee stock.

Japanese Dwarf Trees.

The secret of the growth of these trees by Japanese arboriculturists is of a very "open" character. One method is to scoop out the interior of an Orange and fill the skin with rich mould, into which a seed is put, an aperture being left at the top through which the seed may sprout. The roots in time break through the Orange skin, but are shaved off continually. The vitality of the plant being thus hindered, a dwarf is the result. When the roots cease to grow the ends are varnished over, and the Orange skin, with its contents, is embedded in a pot or vase.

Protecting Fruit from Frost.

In the November number of "Pearson's Magazine" a writer contributes an illustrated article on the above subject. His facts are taken largely from a report recently published by Mr. Alexander G. McAdie, forecast official of the United States Weather Bureau. The article is interestingly written, and will prove attractive, at all events, to fruit growers and lovers of the garden. A few of the methods whereby frost is held at bay in the Orange groves of California, are noticed, the best known of which are the "smudging," whereby fumes rise up amongst the branches of the trees from baskets of smouldering charcoal suspended below the boughs. In France they do this on a large scale by furnishing great smoulder-heaps whose smoke rolls over the vineyards and protects the Vines in late spring. The running of hot water troughs through the groves, from which the steam ascends, is another practice adopted; and, lastly, there is the costly method of overhead lath screens, which are the best of all protections, but entail an outlay of £80 per acre.

October Weather at Belvoir Castle, 1901.

The wind was in a southerly direction twenty days. The total rainfall was 1.37in, this fell on fourteen days, and is 1.71in below the average for the month; the greatest daily fall was 0.25in on the 6th. Barometer (corrected and reduced): highest reading 30.439in on the 31st at 9 p.m.; lowest 29.197in on the 6th at 9 a.m. Thermometers: highest in the shade, 69 deg. on the 1st and 2nd; lowest, 27 deg. on the 26th; mean of daily maxima, 56.12 deg.; mean of daily minima, 41.16 deg.; mean temperature of the month, 48.64 deg; lowest on the grass, 23 deg. on the 26th and 27th; highest in the sun, 111 deg. on the 12th; mean temperature of the earth at 3ft, 53.16 deg. Total sunshine, 107 hours 45 minutes, which is 12 hours 57 minutes above the average for the month; there were six sunless days.—W. H. DIVERS.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. November.										
Sunday ... 3	E.S.E.	deg. 35.5	deg. 35.3	deg. 36.5	deg. 28.5	Ins. —	deg. 42.8	deg. 49.2	deg. 52.4	deg. 22.7
Monday ... 4	E.S.E.	32.2	31.8	35.0	31.5	—	41.9	49.0	52.1	30.0
Tuesday... 5	E.S.E.	32.3	32.0	39.1	31.3	—	41.7	47.4	52.0	32.6
Wed'sday 6	E.S.E.	31.2	30.5	39.1	30.0	—	41.9	47.0	51.5	31.2
Thursday 7	N.W.	38.7	37.7	47.1	30.5	—	41.9	46.8	51.2	32.0
Friday ... 8	W.N.W.	46.3	44.2	51.6	38.5	—	44.2	47.0	51.0	40.0
Saturday 9	W.N.W.	35.0	33.0	50.1	38.5	—	44.7	47.2	50.7	29.5
MEANS ...		35.9	34.9	42.6	32.7	Total —	42.7	47.7	51.6	31.1

A dense, smoky fog prevailed during the first four days of the week, the remaining three days were dull but clear, with a considerable rise in the temperature.

Anemone-flowered Chrysanthemums.

A much-neglected section, perhaps more so than the incurved Chrysanthemums, the Anemone varieties are nevertheless amongst the sweetest flowers produced in unheated conservatories at this, the dullest season of the year. Some splendid examples of large and well-developed blooms were staged within the Royal Aquarium last week, and to see such varieties as Lady Margaret, John Bunyan, Miss A. Love, Gladys Spaulding, and Owen's Perfection, was a relief, a change, and a pleasure indeed. Very, very few novelties are offered by the numerous army of commercial growers, for at present all efforts seem to be expended on the Japanese blooms, at which we cannot grievously complain, for this latter section is worthy of much thoughtful treatment.

No doubt when the growers and raisers have found the highest rise in their efforts to evolve better varieties of the Japanese Chrysanthemums, they will be forced (and the time is not far distant) to experiment, in patience and earnestness, with the many other sections of the "Autumn Queen" that are only waiting to be developed. There are the thread-petalled, the stellate, the reflexed, pompon, the whirlpool forms seen in Mr. T. Carrington and others, the Edith Tabor style of bloom, Anemone pompons, and quite a number of other divisions, sections, or types, whichever you prefer to title them. It is to be hoped that both commercial and private growers will interest themselves more in large-flowered Anemone Chrysanthemums, while not lessening their love for "the Japs."

Societies.

Royal Horticultural—Drill Hall, November 12th.

We have to acknowledge the receipt of the following letter:—

Dear Sir,—The attention of the Council of the Royal Horticultural Society has been drawn to the absolutely unjustifiable imputation cast upon the members of the Fruit and Vegetable Committee, on page 406 of your issue of October 31. The Council are confident, Mr. Editor, that only by some unfortunate oversight could such a calumny have escaped your own deleting pen. They would, therefore, request you to be so kind as to give a prominent publicity to this letter, and to the following resolution, passed by the Council unanimously to-day—viz.,

"Resolved: That it be entered upon the minutes and communicated to the Chairman of the Fruit and Vegetable Committee, that the Council of the Royal Horticultural Society have full confidence in the perfect impartiality and absolute integrity of the Committees of the Society."

I am, Dear Sir, very faithfully yours,
W. WILKS, Secretary.

[We have no reluctance whatever in publishing the above letter. The writer of the passage complained of had no intention of aspersing the character of the Society's Committees, but the expressions used might serve to give others an opportunity of doing so, consequently they should never have been materialised in type. That they obtained publicity was entirely owing to oversight in the hurry of publication. Our surprise was great on seeing the paragraph in question, but our surprise would have been greater still if it had not been made the subject of serious consideration by the Fruit and Vegetable Committee.—ED.]

Tuesday's exhibition was one of the most sparse on record, and the attendance small. Damp and boisterous weather prevailed.

Orchid Committee.

Present: Harry J. Veitch, Esq., in the chair; with Messrs. James O'Brien, J. G. Fowley, de B. Crawshay, H. M. Pollett, H. Ballantine, R. Brooman White, F. A. Rehder, E. Hill, H. J. Chapman, W. H. Young, A. A. Peetezs, J. Wilson Potter, F. Sander, H. H. Tracy, and H. Little.

Messrs. J. Veitch and Sons, Limited, Royal Exotic Nursery, Chelsea, contributed about a dozen plants of *Cypripedium insigne* Sanderæ, whose yellow and white flowers were very conspicuous. The finest plant carried seven magnificent flowers (Silver Banksian Medal). Mr. W. Leaman (gardener to G. Taylor, Esq., Margery Hall, Reigate) staged three grandly flowered plants of *Dendrobium nobile*. At this dull period such choice blooms must meet with high appreciation (Silver Banksian Medal). Mr. W. P. Bound (gardener to J. Colman, Esq., Gatton Park, Reigate) staged a group of Orchids, principally *Cattleyas*. The most notable were *C. labiata* Emperor, *Lælia præstans*, George Prince of Wales, and *Cymbidium Traceyanum* (Silver Flora Medal).

Small exhibits of Orchids were shown by several growers. Mr. W. Stevens (gardener to W. Thompson, Esq., Walton Grange, Stone, Staffs) sent *Odontoglossum crispum* Harryanum roseum;

Mr. G. Whitelegge (gardener to J. Bradshaw, Esq., The Grange, Southgate), *Cattleya Whitei* J. Bradshaw, C. I. Adrianæ, C. I. Angel, and *Lælio-Cattleya Decia*; Mr. H. Parr (gardener to F. A. Bevan, Esq., Trent Park, New Barnet), *Cattleyas* and *Lælias*; Mr. J. Crook, Ford Abbey, Chard, two well-grown specimens of *Cypripedium insigne*; Mr. W. H. Young (Orchid grower to Sir Fred. Wigan, Bart., Clare Lawn, East Sheen), *Lælio-Cattleya Frederick Boyle*; Messrs. Charlesworth and Co., Heaton, Bradford, a set of five hybrid Orchids of much beauty; and Mr. W. Stables (gardener to de Barri Crawshay, Esq., Rosefield, Sevenoaks), *Cymbidium Traceyanum* Crawshayanum and *Odontoglossum crispum* Raymond-Crawshay.

Floral Committee.

Present: W. Marshall, Esq., in the chair; with Messrs. Chas. T. Druery, Geo. Nicholson, James Walker, J. F. McLeod, G. Reuthe, J. Jennings, Chas. Dixon, W. Bain, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, Geo. Paul, and H. B. May.

Mrs. Evans, Forde Abbey, Chard (gardener, Mr. J. Crook), sent two vases of richly coloured *Gloriosa superba*; these were of large size. F. D. Lambert, Esq. (gardener, Mr. J. Tulford), Moor Hall, Cookham, sent a fine batch of *Begonia Caledonia* and *B. Gloire de Lorraine*, the samples of *Caledonia* being the best we have so far seen (Silver Banksian Medal). Messrs. Wells and Co., Redhill, Surrey, staged, on exhibition boards, a splendid selection of Japanese Chrysanthemum blooms. The choice here lay in favour of W. R. Church, Mme. Herewege, Mrs. T. W. Poekett, Ernest Bettsworth, Matthew Smith, Henry Barnes, and a number of unnamed promising seedlings. They also showed singles (Silver-gilt Banksian Medal). Mr. J. Surman, Victoria Nursery, Beckenham, staged *Begonia Gloire de Lorraine*; and from Messrs. J. Veitch and Sons, Limited, came robust, leafy, and floriferous plants of the following winter-flowering *Begonias*: *Winter Perfection*, Mrs. Heal, and John Heal (Silver Banksian Medal).

Messrs. T. S. Ware, Limited, Hale Farm Nurseries, Feltham, staged a small but very representative collection of *Nerines*, including *N. crispa*, *N. Fothergilli* major, *N. Novelty*, *N. Planti*, *N. pudica*, *N. Kitty*, and *N. Mrs. Reuthe*, all of which are distinct, and very attractive. A number of interesting hardy plants were shown. *Stapelia gigantea* was exhibited by Mr. J. M. Carr, Wood House, Twerton-on-Avon, Bath. A number of Chrysanthemum blooms were staged from E. J. Johnstone, Esq. (gardener, Mr. J. Doig), Rougham Hall, Bury St. Edmunds.

Sir T. Lawrence, Bart., also sent a bloom of the incurved *Mme. Marie Liger*. Mr. J. Surman, besides the *Begonias*, also staged a group of dwarf Chrysanthemums grown in the open ground, whence they were lifted and finished under glass. There were, amongst others, *Mytchett Glory*, *Ma Perfection*, John Shrimpton, *Phœbus*, *Vivian Morel*, and others. The group was very creditable indeed (Silver Banksian Medal).

Vegetable Committee.

Present: Alfred H. Pearson, Esq., in the chair; with Messrs. Joseph Cheal, S. Mortimer, Alexander Dean, George Kelf, H. Markham, F. Q. Lane, George Wythes, James H. Veitch, and W. Wilks.

Messrs. J. Laing and Sons, of Forest Hill, Kent, staged 100 dishes of Apples, including *Blenheim*, *Stirling Castle*, *Gascoigne's Scarlet*, *Lane's Prince Albert*, *Winter Queen*, *The Queen*, *Tyler's Kernel*, *Warner's King*, *Bismarck*, *Margil*, *Beauty of Kent*, *Cox's Pomona*, and others (Silver-gilt Knightian Medal). Mr. J. Cook, Ford Abbey Gardens, Chard, staged three fine bunches of *Grape Black Alicante*. R. M. Whiting, Esq., Credenhill, Hereford, staged a dish of *Apple Credenhill Pippin*, and A. W. Foster, Esq., Brockhampton Court, Ross, had *Apple Brockhampton Beauty*.

A splendid collection of Apples and Pears was staged from Mr. A. J. Thomas, Rodmersham, Sittingbourne, including handsome samples of *Newton Wonder*, *The Queen*, *Bramley's Seedling*, *Peasgood's Nonesuch*, *Chelmsford Wonder*, *Sandringham*, and others. Some large Pears of even form and good colour were also on view (Hogg Memorial Medal).

Certificates and Awards of Merit.

Cattleya mollis Lois (A. Chapman).—A fine flower. The recurving sepals and petals are rose-purple. The lip is purple, paling towards the margin. The throat is bright yellow (Award of Merit).

Lælio-Cattleya Luminosa (Charlesworth & Co.).—This is from *Lælia tenebrosa* and *Cattleya aurea*; the sepals and petals are yellowish green with pronounced crimson suffusions; the handsome lip is purple erimson (Award of Merit).

Lælio-Cattleya Digbyano-Mendeli Hessle var. (W. J. Barker).—An exquisitely beautiful variety. The colour is soft rosy lilac; the lip is lemon (First Class Certificate).

Odontoglossum crispum Raymond Crawshay (W. Stables).—A beautiful variety that has form, substance, and colour in its favour. The basal colour is white suffused with rose-lilac; there are numerous large and small chocolate spots on the sepals and petals. The fimbriated lip is white with a central patch of light brown (First Class Certificate).



LARGE ANEMONE-FLOWERED CHRYSANTHEMUMS.

Odontoglossum Crispo-Harryanum roseum (W. Stevens).—A splendid hybrid. The sepals and petals are purple and brown, and the handsome lip is crimson brown and pure white (Award of Merit).

Sophro-Cattleya Nydia (Charlesworth & Co.).—A bigeneric hybrid from *Sophranitis grandiflora* and *Cattleya calumata*; the flower is blood crimson with dark purple splashes (First Class Certificate).

National Chrysanthemum, November 5th, 6th, 7th.

We were unable to include all we wished to say regarding the Chrysanthemum Show in the Aquarium in last week's number, but we herewith furnish the concluding portion of the report.

Decorations.

Five exhibitors staged each three epergnes of Chrysanthemums, these making a rich display. Miss C. B. Cole, of The Vineyard, Feltham, again came to the front on this occasion and won in class 30. Her epergnes were massive, and filled with such varieties as *Source d'Or*, a yellow single variety, and another small creamy pompon. Coloured Croton and Ampelopsis foliage, together with Asparagus, were used. Mrs. W. Green, Harold Wood, Essex, came second; and third, Mr. J. French, Ambleside, Wimbledon Park. Class 31 asked for two designs made in Chrysanthemum blooms. The premier place here was occupied by Miss Cole, with a wreath, very fine and rich, and an epergne. It was most inexplicable to find the two pretty designs of a harp, and a boat with sails, coming second place, and staged by Messrs. Harold Bros., Balham Nursery, S.W. The third was taken by Miss Anstey, 4, Knight's Hill Road, West Norwood. Miss Cole also staged the first prize hand basket, Miss Anstey being second, and Mrs. Walter Strugnell, 213, Brixton Hill, S.W., third, there being eight entrants.

Mrs. F. Franks, Kingston Hill, Surrey, led for two hand bouquets; second, Mr. W. Grundy, Orchardleigh, Rotherhithe, S.E.; and Mr. G. H. Clack third. Contrasts of colours, such as yellow with white, mauve and white, or harmonies of approximating colours, were the features here. Mr. A. Robertson, Mitford House, N.W., staged the best vase of six blooms; Mr. W. Simpson, The Grange, Sutton, Surrey, came second, with fine Mrs. Mease; and third, Mr. C. H. Martin, with Hooper Pearson. Mrs. J. Lewis was the variety staged by Mr. A. Robertson. In class 59, for a basket of natural autumn foliage and berries. Mr. W. Taylor, Tewkesbury Lodge, Forest Hill, stood foremost. He had used black berries of the Privet, the orange crimson trusses of *Crataegus pyracantha*, the hairy vessels of the Traveller's Joy, the Winter Cherry, and Snowberry, together with suitable foliage. Mr. G. H. Clack had a fine basket, and came second, with Mrs. A. Taylor third.

Miscellaneous Exhibits.

Mr. W. J. Godfrey, Exmouth, Devon, quite surprised everyone with the richness of colour displayed by the grand collection of blooms he had arranged. The blooms, large and massive in themselves, were set up in mounds and grouplets, being relieved by Asparagus and green foliage plants. In the foreground were superb samples of the new Mafeking Hero, Queen Alexandra, Nellie Stevens, Godfrey's Masterpiece, Kimberley, Sensation, Exmouth Crimson, Bessie Godfrey, Godfrey's King, and some other grand acquisitions, all of which we have described in recent issues. The group was a centre of much interest. Mr. J. Williams, 4A, Oxford Road, Ealing, showed his rural table decorations and received a small Silver Medal.

Mr. H. J. Jones, Ryecroft Nursery, staged one of his well-known exhibits, which consisted of huge vases filled with separate varieties, arranged with appropriate foliage, while the groundwork was disposed in large mounds of plants carrying specimen blooms, the front being formed with three rows of specimen cut blooms, arranged in a bed of Maidenhair Fern. The whole group was most artistically arranged with a variety of foliage plants, in which Mr. Jones still excels all competitors. A few of the best varieties staged were W. Higgs, W. Neville, John Lyne, Lily Mountford, Mrs. J. C. Neville, Geo. Lawrence, Miss Hetty Dean, Lady Esther, Mrs. W. H. Beever, and Master C. Seymour.

Mr. R. C. Pulling, Monkham's Nursery, Woodford, also arranged a grand exhibit, the quality of the flowers being remarkable, while the arrangement of the exhibit was artistic and boldly carried out, the blooms in the vases being of especial merit. The best blooms were M. Louis Remy, Le Grand Dragon, Australie, Mons. Chenon de Leche, Mrs. Barkley, Mill-cent Richardson, and Lily Mountfort. This exhibit was undoubtedly Mr. Pulling's best effort to the present time, and thoroughly merited the award.

Mr. Norman Davis, Framfield, arranged a table filled with specimen blooms and a few foliage plants. The most conspicuous flowers were Mrs. Bagnald Wilde, W. R. Church, Mrs. J. Thornycroft, Paris 1900, and Geo. Carpenter.

A splendid exhibit was that from Messrs. B. S. Williams and Son, Upper Holloway, which consisted of large Palms, Crotons, and Ferns for foliage plants, while Orchids, Azalea mollis,

Cyclamen, Lily of the Valley, Spiraea, Liliums, Ericas, and Carnations made up a most welcome display.

Horticultural sundries were strongly represented by the Lawes Chemical Manure Company, Limited, 59, Mark Lane, who displayed their specialities. Mr. Joseph Arnold, Leighton Buzzard, had a fine display of various wares, including sandstone for rockeries, peat, loam, and various sands. Messrs. W. Wood and Son, Limited, Wood Green, made a large display of all requisites for the garden, including many novelties.

Messrs. W. Cutbush and Sons, Highgate, occupied a large space in the gallery with a display of flowering and foliage plants that reminded one of spring rather than the dull foggy days of November. The exhibit included large groups of *Lilium tigrinum*, *L. lancifolium rubrum*, *L. longiflorum*, *L. auratum*, and *L. lancifolium album*, while patches of *Azalea mollis*, grand clumps of *Spiraea japonica*, Tree Carnations, Lily of the Valley, Begonias Gloire de Lorraine, and Turnford Hall, Ericas in variety, Bouvardias, and other plants, all tastefully displayed with Palms, Ferns, and a variety of other foliage plants.

Messrs. D. Downe and Son, Hammersmith, had a capital stand of pots, vases, and all gardening utensils, the Orchid pots being the chief feature, while the display of manures was most extensive. From Messrs. Daniels Bros., Limited, came a fine display of vegetables, which were displayed to the best advantage. The Potato Sensation was excellent, as were the Onions Allan's Reliance, Golden Globe, and Golden Rocca. Champion Leeks, Crimson Perfection Beet, Telegraph Carrot, and Giant Red Celery were the chief features, all being of excellent quality. Mr. J. George, Putney, had a most effective exhibit of his numerous wares, assisted with Ferns and Orchids in glasses.

The Permanent Nitrate Committee staged a few samples of their fertiliser, as also had the Ichthemic Guano Company from Ipswich. A few bunches of decorative Chrysanthemums came from Messrs. A. W. Young and Co., The Nurseries, Stevenage, and an exhibit of a new flower vase in various sizes, and these can be lowered or raised to any height. The invention, which is quite new, has a good deal to commend itself to those who have much exhibiting to do, or even the ordinary floral decorative work.

A collection of Apples in baskets came from Messrs. Spooner and Sons, Hounslow Nurseries, Middlesex. Some fine samples of Bijou, Bismark, Wealthy, Lane's Prince Albert, Warner's King, and Annie Elizabeth.

Messrs. George Boyes and Co., Leicester, as specialists in Carnations, showed a grand table filled with most vigorous and floriferous plants, the blooms being specially fresh and beautiful. Messrs. Isaac House and Son, Coombe Nurseries, Westbury-on-Trym, staged a number of the newer and best varieties, including Admiral Avellan, Mrs. J. J. Astor, the American Double, Comte de Brazza, Marie Louise, La France, the Luxonne, Best of All, White Czar, and the pale-coloured St. Helena.

Messrs. W. and R. Owen, Maidenhead, had a massive display of blooms, variedly set-up in groups and mounds, and relieved by Cocos, Pteris, and Bracken fronds. The handsome incurved variety, Frank Payne, was well shown, and the incurving Jap, Miss Elsie Fulton (white), Mermaid (also white), Mrs. W. C. F. Gillam (ruddy bronze), G. J. Warren, Mrs. J. Bissett, Lord Ludlow, and many others. The name of the firm was worked in flowers, the variety being *Source d'Or*, which lends itself well for this purpose.

Messrs. J. Peed and Sons staged a group of Chrysanthemums grown in pots. In the foreground they also set up a vase of a lovely new decorative single variety bearing the name Margaret. The disc is deep yellow, and has a white halo around it, the outer extremity of the heavy fringe of wavy petals being coloured rose-mauve. On all points the flower is a grand acquisition. The group included some finely flowered pieces of *Cattleya labiata*, and a number of good foliage plants. Another equally good seedling was named Golden Gem, and presented a sweet yellow colour in the gaslight.

Messrs. Cannell and Sons, from Swanley, had a wonderful array of their handsome Kent Apples, so marvellously coloured, and of goodly dimensions. The better varieties were those of Cox's Orange Pippin, Lord Suffield, Cox's Pomona, Wadhurst Pippin, Hoary Morning, Peasgood's Nonesuch, Beauty of Wilts, The Queen, Emperor Alexander, and others. In all there were 134 dishes of Apples, together with a number of fine samples of Pears.

The Executors of the late Mr. Thomas Rochford, Turnford Hall, showed the new Begonia, named Turnford Hall, together with retarded Lily of the Valley, Azaleas, and Liliums.

From Messrs. Watkins and Simpson, Tavistock Street, Covent Garden, came an exhibit of *Lantana hybrida*, represented by bushy and well-flowered plants that had been grown from seeds sown on June 5, 1901. The new Apple, Charles Ross, was staged from Messrs. W. Horne and Sons, the raisers. Mr. C. J. Wakefield showed his "Floral-aid," for table decorations. A group of seedling Japs came from Mr. Henry Love, Sandown, Isle of Wight, all of them very bright and attractive.

Hobbies, Limited (Mr. J. Green) were forward with a large assortment of cut blooms, well set up on tall glasses. Messrs. H.

Cannell and Sons also had a fine lot of blooms and groups of Cannas. Messrs. G. Prickett and Sons showed plants of their *Chrysanthemum* Bronze Soleil d'Octobre.

Twelve blooms of a new seedling Jap named Lady Violet Beaumont was staged by Mr. N. Molyneux, Rookesbury Park Gardens, Fareham. The colour is rich crimson, with bronze reverse.

Medals.

We again furnish the following list of medals awarded to non-competitive exhibits:—Gold medals to Messrs. W. J. Godfrey, H. J. Jones, Cutbush and Sons, R. C. Pulling, W. and R. Owen, T. Rochford; and H. Cannell and Sons. Silver-gilt medals to Hobbies, Limited; Daniels Bros., B. S. Williams and Son. Silver Medals to Mr. H. Love, J. Peed and Son, J. Williams, Spooner and Sons, and J. Boyes.

Loughborough, November 2nd.

The twenty-seventh show was held in the Town Hall on Saturday, the 2nd inst., and was decidedly successful. In the open section Mr. J. Smith was unapproachable for incurveds, and Mr. Jamieson was also very strong in the section devoted to Japs, he taking most of the leading prizes. A N.C.S. silver medal was given with first prize for eighteen Japs, Mr. Marsh winning this for the second year successively. Mr. Prince staged the best collection of *Chrysanthemums* in a group for effect, while Mr. Smith annexed the award for a miscellaneous group, he having some splendid samples of *Begonia Gloire de Lorraine*. Among the non-competitive exhibits the most interesting was a stand of two dozen entirely new varieties of Japanese *Chrysanthemums*, sent by Mr. H. Weekes, of Thrumpton Hall Gardens, nearly all his own seeding, and not yet placed in commerce. A display of Palms was lent by Mr. W. B. Paget. Other non-competitive exhibits included a stand of flowers by Mr. F. H. Gbbins, *Begonias* by Mr. R. H. Ratcliff, Stanford Hall, *Chrysanthemums* by Mr. J. H. Prince, and numerous varieties of winter flowering Zonal *Pelargoniums* by Mr. J. Smith.

Cardiff and District, November 5th and 6th.

The instigators of the show held annually about this time are generally highly successful in securing a display of magnificent *Chrysanthemums* and autumn produce from the Cardiff and South Wales gardens. Their pains have not been without results, encouraging results, as evidenced by the continued and increased patronage of exhibitors and visitors. The Park Hall on Tuesday and Wednesday a week ago, was again the centre wherein the flowers, fruit, and vegetables were staged, the Mayor of Cardiff performing the opening function. On a close examination it was found that the open cut bloom classes were not so strong as usual, but the amateur growers were forward in greater number, to equalise matters. Mr. Basham sent the splendid exhibit of fruit of which we furnish fuller notes in our story of the Newport Show; and Lord Llangatock's able gardener, to wit, Mr. Thomas Coomber, showed what a private garden in this rich region is capable of producing when skill, energy, and knowledge are brought in practical action. The famous Altrincham firm of William Clibran and Son staged a huge table of fruit and a select representation of cut *Chrysanthemums*, largely composed of new varieties of singles. Other exhibitors of non-competitive displays included Messrs. Cross Bros., A. E. Price, W. Treseder, of Dahlia renown; and Jarman and Co., from Chard, in Somerset. The judges were Messrs. W. G. Adams (Southsea), Thomas Coomber (The Hendre, Monmouth), and E. H. Battram (Parknewydd). Mr. Arthur Angle's band played a spirited selection of music during the afternoon. After the opening ceremony had been accomplished the annual luncheon took place in the Park Hotel, when, amongst others noted were the Mayor, supported by Messrs. J. W. Curtis, J. Grimes, F. G. Treseder, A. T. Stephens, J. M. Gerhold, J. Julian "Battram," Malpas, Harry Gillett, the active secretary, and others. During the luncheon Mr. Gillett (producing a couple of telegrams) announced that Mr. W. G. Drake, Cathays, Cardiff, a member and exhibitor, had that day captured the prize for the Cardiff Society (affiliated) at the Royal Aquarium in London for a stand of twenty-four Japs and twenty-four incurveds; also a second prize for forty-eight distinct Japanese blooms. Mr. Drake was further successful in getting the second prize at Plymouth for a stand of forty-eight Japs, as our report of that West of England show denotes. The affiliated prize is open to all societies in the kingdom affiliated to the N.C.S. It carries £10 in cash for the winner or winners, and a Challenge Shield, to be held by the president of the society for the time being. The Cardiff representative thus honoured both himself and his society. A few years ago he had only one small greenhouse, now he is able to take large and important prizes at London, Plymouth, and Cardiff, on the same day at three different exhibitions. He won for the twenty-four distinct blooms at Cardiff, and was followed by Mr. J. Howe, of Llandaff. Messrs. J. Howe and W. H. Pitt (Abergavenny), were placed in this order for the dozen Japs, each with strong

sets; while for twenty-four incurved blooms Mr. Drake beat Mrs. Picton Turbervill; and third, Mr. W. H. Pitt. For a group of *Chrysanthemums* arranged for effect, Mr. Treseder was triumphant; Mrs. Insole coming second, and lastly Mr. W. A. Ellis. Mr. Treseder also led in classes 4, 5, 6, 7, 8, 9, and 13. The decorative classes allowed him scope for his artistic powers, and he proved himself not awanting. Primulas and Cyclamen were also entered in this exhibition. In division II., open to amateurs and gentlemen's gardeners, we found the leading awards had been accorded to Dr. Wallace, Mr. Thomas Pynman, Mr. G. Nurse, Mr. Drake, J. Howell, W. H. Owens, and Mr. W. Hathedale. In class 26, for twenty-four blooms, Japanese, not less than eighteen varieties, Mr. A. T. Stephens, Penarth, obtained premier award, and N.C.S. silver medal; 2nd, Mrs. Picton Turbervill. Twelve blooms, Japanese, not less than six varieties:—1st, Mr. Frank Hill, Cardiff; 2nd, Mr. A. T. Stephens; 3rd, Dr. Lynn Thomas, C.B. Twelve blooms, not less than six varieties, incurved:—1st, Mr. E. Parsons; 2nd, Mr. J. C. Hanbury (Pontypool); 3rd, Sir H. M. Jackson, Bart. Mr. A. T. Stephens won for six white Japs; for twelve Japs, Mr. Hill; and other winners in the remaining classes were Drs. Wallace and Lyne Thomas, Messrs. T. Evans (Cowbridge), W. Glen, T. Morel, J. Howell, T. G. Cartwright, G. Rutherford, L. Gottwaltz, and T. M. Franklin. Fruit was well represented, the leading honours, in class 63 (open), for a collection of dessert fruit, going to Mr. Moffatt; second, Mr. Pitt; and third, Mrs. Turbervill's gardener.

Class 57 is scheduled as the "New Century Class," and is devoted to fruit, the prizes being given by Mr. John Julian and another. Mr. Mullins, from Preswylfa, led off, and was followed for second by General Lee. Grapes were creditable, Mr. Franklin doing well. General Lee and Mr. A. Redwood won in classes 61 and 62 respectively, for collections of six kinds of vegetables. We note that they are scheduled as "varieties," which might land the society in difficulty if dispute were made by exhibitors.

The following special awards were made:—

Certificates of merit—Dahlias: Mr. W. Treseder. Collection of *Chrysanthemums*: Mr. Tom Clarke. Collection of honey: Mr. Dent.

Gold medal to Mr. John Basham for collection of fruit; silver medal to Messrs. W. Clibran and Son; bronze medal to Mr. W. Treseder for collection of hardy flowers, &c.; award of merit to Messrs. Jarman and Co. for fruit.

Southampton, November 5th and 6th.

The Royal Southampton Horticultural Society well maintained their reputation of holding on the above dates one of their representative autumn shows, as usual, in the Skating Rink. Cut blooms were, perhaps, the leading feature. The principal class was that for twelve varieties Japanese, three blooms of each, staged in vases, with *Chrysanthemum* foliage. With handsome examples of Mrs. H. Weeks, Australie, W. R. Church, Nellie Pockett, Le Grand Dragon, Edwin Molyneux, Mrs. Barkley, Mrs. Mease, T. Carrington, Mme. Carnot, Mrs. J. Barks, and a seedling, Mr. G. Hall, gardener to Louisa Lady Ashburton, Melchet Court, Romsey, secured, quite easily, the leading award. Mr. N. H. Mose, Belmont Nurseries, Sholing, second, with a fine exhibit. The twenty-four Japanese was a strong class. Mr. Davies, gardener to Mrs. Ogilvie, Hambledon, won with a bright, heavy set of blooms. Mr. Hall followed, also staging well. Eighteen varieties Japanese were well shown by Mr. B. Hollis, gardener to Major Chichester, Embley Park, Romsey. Lord Ludlow, Graphic, Mutual Friend, and E. Molyneux were quite of the best order of merit. Mr. Mose second. In the class set apart for Japanese incurved there was a spirited competition, Mr. Hall winning for twelve with thoroughly good examples of Miss A. Byron, T. Carrington, and Mrs. Weeks. Mr. F. Brown, jun., New Alma Road, Southampton, a close second. For two Japanese varieties any other colour than white, Mr. C. Hosey, gardener to J. C. D'Esterre, Esq., Glenfield, Southampton, with exceedingly fine examples of Oceana and Mrs. Coombes secured the leading award. Little inferior were the blooms of Australie and Phœbus with which Mr. Brown annexed the second prize. Mutual Friend and Mrs. Weeks won for Mr. Hosey the first place for any white flowered Japanese.

Incurved varieties were a feature. For twelve distinct, Mr. Woodfine, gardener to Colonel Boyd, Crofton House, Titchfield, was an easy premier prizetaker with typical examples of popular kinds. Mr. Webb, gardener to His Majesty the King, Osborne House, a close second. Mr. E. Brown quite swept the boards in the classes set apart for amateurs, with very fine blooms of leading varieties; especially fine were his blooms of Mrs. J. Bryant, Miss Maud Douglas, W. H. Whitehouse, W. R. Church, and Mrs. Thorneycroft. The premier Japanese bloom was a massive example of Mrs. Weeks belonging to Mr. Hall, a similar prize falling to Mr. M. Hodgson for C. H. Curtis in the incurved division. Groups of *Chrysanthemums* were very finely represented. Mr. Hosey won easily the best position with grand examples of such popular varieties as M. Chenon de Léché, Le Grand Dragon, and Phœbus. Mr. B. Henley, Masonic Hall, Woolston, second. Four plants were best shown by Mr. Hosey—

grand examples of cultural skill—as also were his “bush” plants, with which he secured the premier award. Mr. E. Wills, Winchester Road, Southampton, had the best arranged group of miscellaneous plants. Grapes, Apples, and Pears were finely shown.

West of England (Plymouth), November 5th and 6th.

Held in the Guildhall, Plymouth, this year's West of England Chrysanthemum Exhibition was entirely successful; the classes were well filled, and splendid blooms were staged. Mr. W. J. Godfrey, from Exmouth, staged cut blooms and Zonal Pelargoniums; Messrs. R. Veitch and Son had a wonderful display of flowers and fruit, the latter being both representative and very fine. Messrs. Rowlands and Sons, Beaumont Road, had late Strawberries amongst other things; while elsewhere in the hall were exhibits from Mr. A. Edwards, of Nottingham; Mr. T. Seward, Plympton (salads); and from the Devonshire Bee-keepers' Association (representative, Mr. Foster) came honey and other products. Messrs. Sutton and Sons staged fully a ton of Potatoes in different varieties. Six hundred entries were staged, which makes an increase of 150 over that of last year. In the open classes for cut blooms, that for forty-eight Japs in two dozen varieties was of most importance, and here the renowned Aquarium champion, Mr. F. S. Vallis, a very young man he is, too, secured the first prize with a set of large and most handsome blooms in the varieties which he manages so well, and which we have again and again named. He was followed by Mr. G. W. Drake, of Cardiff, another prominent exhibitor at large shows. Mr. B. H. Hill, from Crediton, secured prize four. All were good sets. The order for twenty-four Japs, eighteen varieties, was: first, Mr. Vallis; second, Mr. F. Bradshaw, Lipton Park; and third, Mrs. Hamond Spencer, Teignmouth. The prizes for twenty-four Japs, eighteen varieties, in the division confined to residents within a fifteen mile radius, were awarded to the gardener of Admiral Buller first, General Pole-Carew second, and J. F. Winnicott third. T. Martyn, Esq., won for a dozen distinct blooms in this division; Admiral Buller, second; and Admiral Lord Charles Scott, third. In the amateurs' open cut bloom classes the chief prizes fell to Mr. E. J. S. Price, of Taunton; Mr. J. E. Booles, Stoke; and Mr. G. Spencer, of Oreston. Groups of plants were invited in three separate sections. Sir James Jenkins and Messrs. Webber and Sons both were prominent in the six trained specimen class; while for a group of miscellaneous stove and greenhouse plants, along with Chrysanthemums, open to Devon and Cornwall only, Messrs. Webber and Sons were first; Admiral Parker, of Cornwood, second; third, Mrs. Upton C. Dormer, of Stoke. Orchids were excellently shown from the gardens of F. H. Hodges, Esq., Plymouth, and Lord Auckland, Kitley. Fruit was also splendidly represented from the chief gardens of Devon and Cornwall. A few vegetables were on view, and these were highly creditable. Amongst the chief prizewinners for a group of Chrysanthemums, confined to residents around Plymouth were Messrs. Webber, Sir J. Jenkins, and S. T. Tall, Esq. The judges were: cut blooms, Messrs. F. C. Smale (Torquay) and W. Dolling (Newton Abbot); fruit and vegetables, Messrs. J. G. Garland (Broadclyst) and J. Dawe (Ivy-bridge); plants, Messrs. F. W. Cavill (Flete) and T. H. Slade (Poltimore Park). Messrs. F. C. Smale, J. G. Garland, and F. W. Cavill judged the miscellaneous groups, and Messrs. W. Dolling, J. Dawe, and T. H. Slade the groups of Chrysanthemums.

Ealing Horticultural, November 6th.

This exhibition was held, as usual, in the Victoria Hall, on a cold and foggy day, unfavourable to a large attendance of the public. The exhibits, probably owing to the incidence of the season, were fewer than usual, but what was staged was generally very good. The arrangements made by Mr. George Cannon, the secretary, were excellent.

There were three classes for groups of plants, and in that for the largest Mr. H. W. Peal (C. Edwards, gardener) was placed first, and Mr. E. P. Oakshott (C. Long, gardener) second. Both had good blooms, but owing to the formal arrangement favoured at Ealing the plants lost much of their effectiveness. In the class for a small group Mr. G. C. Chambers (W. Beasley, gardener) was first, and Mr. J. Bishop, Acton (C. Lovesy, gardener), second. All were very bright and effective, but sadly formal. In the class for a group of miscellaneous plants, Mr. A. G. Dixon (T. R. Hogg, gardener) was first, with an attractive arrangement, in which a few Orchids played a leading part, and Mr. J. Bishop was second. There were also classes for plants, but they are not now so well shown as they were a few years ago.

Some very good blooms are produced at Ealing. The twelve varieties of Japs from Mr. H. W. Peal did his gardener great credit. Such varieties as Mrs. Barkley, Mrs. Mease, R. H. Pearson, Phœbus, Miss Nellie Pockett, Mrs. H. Weeks, selected, as at the Aquarium as the premier Japanese in the show, were seen in good form. Mr. E. P. Oakshott came in a good second. The best six blooms of one variety were Mrs. W. Mease, from Mr.

H. W. Peal. Mr. E. Hyde came second with some blooms of Miss Alice Byron.

Some excellent incurved varieties were also shown. In the class for twelve distinct Mr. Peal's able gardener came in first with Lady Isabel (selected as the premier incurved), Countess of Warwick, Madame Ferlat, Golden Empress of India, Glory of Hanwell, C. H. Curtis, Madame Darrier, &c. Mr. E. P. Oakshott was second, having some of the foregoing in capital character. Mr. Peal was also first with three blooms, and Mr. G. C. Chambers with six.

There was a class for twelve Anemone flowered, in which Mr. Peal was placed first. He had in good character such varieties as Owen's Perfection, Mrs. P. R. Dunn, Robin Adair, Sir W. Raleigh, John Bunyan, &c. Mr. Oakshott came second. His leading blooms were Gluck, Lady Margaret, and Georges Sand.

With twelve bunches of pompons Mr. Peal was first and Mr. G. C. Chambers with six bunches. Some very pretty symmetrical blooms of standard varieties were staged.

In the way of floral decorations, in which ladies were the competitors, pretty bouquets, stands, &c., were staged, there were some of real artistic merit. Cottagers exhibited plants also, some of them very creditable specimens, and they had cut blooms also.

There were a few classes for Grapes, Apples, and Pears. Only one stand of three bunches of the former were staged, Mr. H. W. Peal having very good White Muscats. The best three dishes of dessert Apples came from Mrs. Boyall (W. Chaffers, gardener), who had excellent fruit of Cox's Orange Pippin, Ribston Pippin, and King of Pippins. Mrs. Willey came second, having the two former and the Mother Apple in the place of the latter. Mrs. Boyall came first with three dishes of dessert Pears, having fine fruit of Maréchal de la Cour, Pitmaston Duchess, and Beurré Diel. Mrs. Willey came second with only just inferior fruit of Marie Louise d'Uccle, Beurré Diel, and Beurré Superfin.

There were a few classes for vegetables, Mr. H. W. Peal winning the first prizes in all. Very good collections of vegetables were shown by cottagers in several classes.

Mr. George Reynolds, Gunnersbury Park, and Mr. J. Hudson, Gunnersbury House, contributed collections of plants. Begonia Gloire de Lorraine was finely shown by both. The latter had some excellent fruit of Newton Wonder Apple. Mr. George Cannon, St. John's Nursery, had an excellent collection of Middlesex grown Apples and Pears. Among the latter was King Edward, a fine baking variety. Mrs. H. B. Smith, court florist, Ealing, contributed, not for competition various superbly executed designs in flowers, all excellent object lessons for the Ealing ladies.

Evesham, November 6th.

The annual exhibition of Chrysanthemums, fruit, and vegetables was held in the Town Hall on the 6th inst., and was a most successful one. Groups, cut flowers, fruit, and vegetables were of great merit, and were much admired by the visitors. A Challenge Cup is offered for the best group of Chrysanthemums and foliage plants, and this was deservedly won by Mr. Witts, the hard-working and unostentatious secretary. Mr. Cox was a very close second, and Miss Birlingham was a very good third. It is seldom that three groups of plants are so nearly equal in merit. The Dowager Lady Hindlip, Droitwich (gardener, Mr. Crookes), was easily first with twenty-four Japanese cut blooms in not less than eighteen varieties. A. J. Swinburne, Esq., was second, and Lady Northwick (gardener, Mr. Hillier), third.

Mr. Charles Myatt (a son of the famous raiser of Potatoes, Strawberries, and Rhubarb) was first with six dishes of culinary Apples, staging fruit highly coloured and of great merit. Lady Hindlip was a good second with larger fruit, but not so good in quality. Lady Northwick was first with six dishes of dessert Apples, and Lady Hindlip second. One of the features of this show is the wreaths of Onions. These are always of excellent quality, and this year the best wreath was especially fine. This was exhibited by Mr. Hillier, gardener to Lady Northwick. The vegetables generally were good, especially those which are required to be exhibited in round hampers. By an accident on the part of the judges the best Carrots in the exhibition were placed second. Incidents of this kind are as unsatisfactory to the judges as they are to the exhibitors.—J. U.

Newport (Mon.) Chrysanthemum, November 7th.

The above society held their thirteenth annual show in the Gymnasium, Newport, on the 7th inst. The chief interest was in the class for twenty-four cut Japanese blooms, for which a Challenge Vase was offered by Dr. Rutherford Harris. The first award was secured by Mr. J. J. Graham, gardener to A. T. Stephens, Esq., who staged fine samples of Mrs. J. Lewis (2), Mr. L. Remy (2), Lord Salisbury (2), Calvat's '99 (2), Graphic (2), Phœbus, Mrs. Barkley (3), Nellie Pockett (3), Matthew Smith (2),

Pride of Madford, Mrs. Mease, Le Grand Dragon, and W. R. Church (2). Mr. G. W. Drake, of Cardiff, last year's winner, was very close indeed, being scarcely a point behind with Madame Carnot (2), E. Molyneux, Mrs. J. Lewis (3), one of which was awarded the N.C.S. certificate for best bloom in the show; Mr. T. Carrington (2), Mr. L. Remy (3), Graphic (2), Australie, Lord Salisbury, Calvat's '99 (2), Mrs. Barkley, Chenon de Léché (2), G. J. Warren, Mons. Hoste (very fine), and W.R. Church (2), both good colour. Mr. J. Duff, gardener to Mrs. Williams, was placed third. For twelve Japs Mr. Graham scored. Amongst the best were N. Pockett, Mr. R. Church, Mrs. Lewis, Mrs. Barkley, and Mrs. Coombes. Mr. E. Parsons was second. In the class for six incurveds Mr. Drake was easily first with fine examples of Ialene, C. H. Curtis, Ma Perfection, Mrs. J. Howe, H. J. Jones, and Mrs. C. W. Egan. Mr. E. Allen, gardener to G. J. Jones, Esq., was runner-up. In class B Mr. Graham again secured first place for twelve Japs; Mr. E. Parsons once more second. Mr. W. E. Lewis, gardener to Dr. G. Thomas, was placed first for a good group of Chrysanthemums and ornamental foliage plants; H. J. Davies, Esq., was second. A Silver Cup, presented by Dr. Rutherford Harris, produced keen competition, for a group of Chrysanthemums occupying 30 square feet, no less than six competitors competing. Mr. D. Powell, gardener to Col. Wallis, secured the Cup; Mr. J. George, gardener to H. Freeman, Esq., being placed second. Mr. G. Sharratt, gardener to C. H. Bailey, Esq., was first for a good group of miscellaneous plants. The amateurs' and cottagers' classes for cut blooms produced keen rivalry and plenty of entries. Primulas were well represented, and the competition in fruit classes was very good. Mr. R. Giddings, gardener to S. Dean, Esq., exhibited some splendid trained and bush plants of Chrysanthemums. One of the features of the show was the fine exhibit of fruit, not for competition, put up by Mr. John Basham, Basaleg Nurseries. Amongst the many fine dishes the most striking were Peasgood's Nonesuch, The Queen, Lane's Prince Albert, Tower of Glamis (very good), Crimson Queen, Allington Pippin (grand), Adam's Pearmain (exceptionally good), Ecklinville Seedling, Jubilee, Newton Wonder, Sandringham, and Lord Derby. The same collection was awarded a Gold Medal at Cardiff earlier in the week. Taken as a whole, it was a very excellent show, and the committee deserve congratulations.

Highgate and District Chrysanthemum, Nov. 7th and 8th.

Under the able and attentive superintendence of Mr. W. E. Boyce, the Highgate Chrysanthemum growers succeeded in bringing together an exceedingly creditable and remarkably attractive exhibition in the Northfield Hall, on Thursday and Friday of last week. All sections were well supported, and fine blooms were staged in all classes. A number of Silver Cups are annually offered, one being given by the president, C. F. Cory-Wright, Esq., J.P., &c., jointly with E. H. Smithett, Esq., as first in the principal vase class; another by the tradesmen of Highgate for eighteen Japanese blooms; and two others are offered in separate classes. A number of medals are awarded, together with good many prizes and certificates accorded to new varieties. The school children of the neighbourhood are allowed to visit the show on the second day. Music was rendered during the afternoons and evenings.

PLANTS.—Class 1, for a group of plants covering 60 sq ft of space. The first award was secured by Mr. T. L. Turk, gardener to T. Boney, Esq., Southwood House, Highgate. The group consisted of Japanese varieties, with a few pompons and reflexed sorts interspersed. The second honours were accorded to Mr. E. H. Chitty, gardener to S. Hardy, Esq., Cholmeley Lodge, Highgate, who ran Mr. Turk rather closely. Both groups were bright, and had highly creditable plants. The prize for four trained plants, large flowering distinct varieties, was given to Mr. H. Tilbury, of Monkfirth, Old Southgate, who was the sole exhibitor. For one trained specimen two entered, Mr. H. Stonebridge, Bishopswood, Highgate, leading with a couple of handsome plants, one of which spanned about 12ft or more in circumference. Mr. H. Tilbury, of Highgate, followed as a creditable second.

TABLE DECORATIONS.—The competition in class 4 was exceedingly keen, the decision being given with only half a point in favour of the first man. The quality of the blooms was undoubtedly of a high order, and very creditable indeed to the growers. Mr. Stonebridge was the forefront with vases of M. Chenon de Léché, Hairy Wonder, Pride of Madford, Kathleen Rogers, Gustave Henry, and Thérèse Rey, Lionel Humphreys, and Phœbus. The second prize was annexed by Mr. Turk, who won the Cup last year. His blooms were certainly of grand quality and well staged.

Class 5 was splendid, and brought eight entries, the first prize lot coming from Mr. Tilbury; second Mr. Frost, Okeleigh Park; and Mr. J. Kirkwood, Finchley, third.

For a couple of vases Mr. Turk led, followed by Mr. Adams, and third Mr. Chitty, gardener to S. Hardy, Esq., Highgate, all of them very fine. The first prize two were especially handsome and well arranged. Mr. Turk, the renowned pompon grower of the Highgate district, won in the class for a vase of these varieties, he showing one of the finest exhibits of these we have seen during the season. Mr. Chitty was a fair second; Mr. J. T. Bealby (amateur), Finchley, third. In class 8, for a dozen sprays, there were ten entries, the first prize going to Mr. J. Sandford, gardener to G. W. Wright-Ingle, Esq.; Mr. Turk second; and third, Mr. G. Frost. All of these vases were bright and very beautiful indeed. In class 10, for dinner-table decorations, three entrants came forward, with three epergnes each, and here again Mr. Turk led off. He was followed by Mr. Shrimpton, who was followed for third by Mr. D. B. Crane. The first prize arrangement was exceedingly light and graceful, at the same time rich in colour, although the Croton foliage lying sparsely on the table was no great improvement. Mr. D. B. Crane led for an epergne set off with Chrysanthemum blooms, second Mr. Halsey (amateur), and third Mr. A. Taylor, from Finchley. There were five entries in this latter class.

Cut Blooms.

The competition in the Japanese cut bloom classes produced large and really handsome flowers. For two dozen blooms in eighteen varieties the premier award was captured by Mr. J. Kirkwood, of Grass Park House, who staged fine samples of Lily Mountford, Henry Weeks, Mutual Friend, M. Fatzer, Calvat's '99, Lady Hanham, M. Chenon de Léché, and Mrs. Barkley. Mr. A. Jones, Hadley Manor, Barnet, rather a close second, though a few of his blooms lacked the size and density of colour seen in Mr. Kirkwood's collection. Mr. T. Carrington was well shown, as was also Mrs. Mease. M. Chenon de Léché, and Thomas Wilkins. The third prize was taken by Mr. J. Sandford. For a dozen distinct Japs Mr. Kirkwood again won leading honours with an even set; Mr. J. Sandford second; and Mr. H. Tilbury next. Class 21 produced seven sets of half a dozen distinct Japanese blooms. Mr. Frost was in the van, and had remarkably fine blooms of Mrs. W. Mease, E. Molyneux, Surpasse Amiral, M. Chenon de Léché, Mme. Carnot, and M. Gruyer. Mr. A. Jones was second, and third Mr. J. Sandford.

Three collections were entered in class 33, in which a Silver Cup was offered by the Earl of Mansfield for twenty-four cut blooms, to consist of a dozen each of Japs and incurved. Mr. Turk gained the Cup with a fair set; Mr. J. Adams, as second, obtained a Silver-gilt Medal; and third, Mr. J. Kine, from Blenheim, Highgate. Mr. Turk led for twelve varieties of pompons in class 27, and also in class 30 for a similar entry. In the latter class Mr. J. Adams came second, and Mr. Chitty second in class 27. Some fine incurved blooms were staged, the principal prizewinners being Messrs. Kirkwood, Tilbury, Sandford, and A. Jones.

Some creditable collections of vegetables was shown by Messrs. Tomlin, H. Bass, W. Wood, and W. Bignell, who each obtained awards.

Messrs. Cannell and Sons sent some of their delightful single and pompon varieties from Swanley. Messrs. Cutbush and Sons and Messrs. B. S. Williams and Son, Upper Holloway, sent plants for the decoration of the hall.

Stratford-on-Avon, November 7th and 8th.

The sixth annual show of this enterprising society was held in the Town Hall, and proved to be the largest yet held there. The arrangements were efficiently carried out by the Messrs. G. and J. G. Randall, assisted by Mr. G. Boyden, Mr. John Butcher, and other committeemen. The society has an influential complement of vice-presidents, and including Miss Marie Corelli. The exhibition was opened by A. D. Flower, Esq. The main feature of the show was the cut flower section, including those staged in vases as well as those on the orthodox boards. Groups of Chrysanthemums, placed at the four corners of the ball-room, enhanced the effect; whilst two other large rooms were occupied by collections of Chrysanthemum plants, cut blooms in vases, fruit and vegetables. The competition in the cut bloom classes was very keen, and several grand blooms were staged. The prize for the best bloom in the local classes was awarded to Mr. H. Tullet, gardener to J. R. West, Esq., Alscot Park, Stratford, with Australian Gold. Subjoined are the names of the winners in a few of the principal classes:—

In the open class for twenty-four cut blooms, **Japanese, distinct**—first prize £5—Mr. H. Blakeway, gardener to P. A. Muntz, Esq., M.P., first, with Vicar of Leatherhead, Le Grand Dragon, Mrs. G. Mileham, Mrs. Weeks, Charles Davis, and Vivian Morel, all very fine; also, Madame Rivoire, Ethel Addison, H. Weeks, International, Mrs. Barks, Pride of Exmouth, Mr. Barrett, Madame Remy, Lionel Humphrey, Madame Henri, Soleil d'Octobre, Lord Ludlow, Mrs. Payne, M. Remy, Australie, Mrs. Constance, Mrs. H. Coombes, and Charles Knowles. The

second prize fell to Mr. J. Martin, gardener to Mrs. Swingbourne, Courdean Hall, Winchcombe, with a very close lot, his Mrs. Weeks, Florence Molyneux, J. R. Upton, Le Grand Dragon, and Mrs. Barkley were amongst the best; the third prize going to Mr. T. Pritchard, gardener to F. E. Muntz, Esq., Umberslade Hall. An extra prize was given to Mr. H. Liney. There were six exhibits in the class. The class for twelve cut blooms, Japanese, distinct varieties, brought out nine exhibits, and Mr. T. Pritchard proved the victor with a grand set; second, Mr. H. Liney, gardener to W. M. Low, Esq., Wellesborne House; and third, Dr. T. W. Norbury, Stratford-on-Avon. For six blooms any one variety, Mr. T. Pritchard was again to the front with an excellent stand of Mrs. Mease; second, Mr. J. Martin, with Madame Carnot; and third, Mr. S. Johnson, gardener to D. S. Gregg, Esq., Temple Grafton Court, Alcester. An attractive class was that of the one vase of cut blooms, on long stems, six distinct varieties. There were seven entries. The first prize was adjudged Dr. T. W. Norbury; second, Mr. W. Hillier, gardener to the Right Hon. Lady Northwick, Park, Blockley; and the third to Mr. W. Cannaby, gardener to W. B. Gibbons, Esq., Ettington, Stratford-on-Avon. In the class for one vase or epergne of Chrysanthemums, arranged with foliage for table decoration, Miss Perkins, Stratford-on-Avon, was placed first with a tastefully arranged assortment of chiefly pompons and richly coloured, small foliaged accompaniments; the second going to Mrs. Norbury, and the third to Mrs. A. D. Flower. For twelve incurved blooms, not less than six varieties, Mr. J. Martin was to the fore; second, Mr. W. Hillier; and third, Mr. W. Lusty, gardener to Colonel Rogers, Cheltenham.

LOCAL CLASSES.—These were also well represented, and for a group of Chrysanthemums, with or without foliage plants, not to exceed 6ft by 5ft, Mr. H. Hygate, gardener to the Rev. G. Arbuthnot, vicar of Stratford-on-Avon, annexed the first prize with a very good arrangement of excellent plants, the second prize falling to Mr. H. Ward, gardener to Miss Hartley. In a corresponding class, not to exceed 5ft by 4ft, Mr. W. F. Mills, gardener to A. D. Flower, Esq., obtained the first prize, and Mr. H. Hygate was in close running. Specimen Chrysanthemums, in pots, were fairly well shown, and dwarfness was a feature recognised by the judges. A feature were the boxes of six Japanese blooms, distinct, arranged with foliage for effect, the winners being respectively Dr. Norbury and Messrs. H. Hygate and W. F. Mills. For twelve blooms of six yellow and six white, first honours fell to Mr. H. Tullett, gardener to J. R. West, Esq., Alscot Park, with Australian Gold, Edith Tabor, Simplicity, Mr. H. Weeks, and Mr. P. Rivoire; second, Mr. H. Liney; and third, Dr. Norbury. For twelve blooms, Japanese, distinct, Mr. H. Tullett was to the fore; second, Dr. Norbury; third, Mr. W. Cannaby. For six blooms, Japanese, distinct, Mr. H. Tullett led off with a capital lot comprising the premier blooms already mentioned, M. Chenon de Léché, Mrs. Mease, Lord Salisbury, Madame P. Rivoire, and Australie. The second prize fell to Mr. H. Hygate, and an excellent bloom of Directeur Liebert was in the collection; third, Mr. G. Barker. For six blooms any one variety, Mr. H. Tullett was victorious; second, Mr. John Harris; and third, Mr. H. Ward, gardener to Miss A. Hartley.

Fruit was fairly well shown, but only one collection, by Mr. W. Hillier, and in which was a remarkably fine dish of Medlars; the first prize was awarded. There were six exhibits of Alicante Grapes, the respective successful exhibitors being Mr. H. Blathway, H. Liney, and W. Cannaby, all with medium-sized bunches and berries very well coloured. There were two exhibits of white Grapes, and Mr. W. F. Mills was placed first for compact bunches with uniformly good berries of Muscat of Alexandria; second, Mr. J. Chaplin, gardener to Mrs. Flower. Apples were capitally exhibited, and in the culinary section there were thirteen exhibits. The first prize was adjudged Mr. G. H. Colin; second, Mr. W. Hillier; and third, Mr. H. Tullett. For three dishes of dessert varieties, Mr. J. Martin chimed in with very good examples of Cox's Orange Pippin, King of the Pippins, and Cellini; second, Mr. H. Tullett, with very fine Cox's Orange, Ribston Pippin, and Court Pendu Plat; third, Mr. G. H. Colin. Pears also were very well shown, the first prize going to Mr. W. F. Mills, with Beurré Superfin, Deyenné du Comice, and Beurré Clairgeau; second, Mr. W. Hillier. Vegetables were very well shown, but the majority of the Carrots evidenced the predatory visits of the grub pest. Mr. H. Tullett was responsible for a collection of very fine Leeks, Cauliflowers, Brussels Sprouts, Tomatoes, very large Ailsa Craig Onions, shapely Supreme Potatoes, Blood-red Beet, Celery, and Carrots; second, Mr. W. Hillier; and third, Mr. W. F. Mills. J. Smallwood, Esq., exhibited (not for competition) a grand dozen fruits of Peasgood's Nonesuch Apples, and a fine fruit of Pitmaston Duchesse d'Angoulême Pear, weighing 1lb 10oz. The amateur local classes were very well represented in the way of plants, cut blooms of Chrysanthemums, window plants, and vegetables, space for which forbids details. There was a large exhibit of honey for competition. Thursday being the shopkeepers' early closing day, the streets of the birthplace of the immortal bard would have been comparatively dull but for the procession of visitors to the Town Hall exhibition.

Winchester, November 7th and 8th.

The annual autumn exhibition was held in the Guildhall, which is in itself a capital site for such a display. Many good displays have been made here in the past, but not one to equal the present, the large hall and two smaller rooms being packed to overflowing, while the quality of the exhibits were quite up to the average.

PLANTS.—Chrysanthemums grown and arranged for effect in groups, are here a feature. The plants range in height from 18in to 4ft, are well clothed with foliage, and carry very fine blossoms; while the best varieties are cultivated. For the seventh year in succession, Mr. G. Street, gardener to Mr. Burge, Winchester College, secured the leading award with his customary display. Mr. P. Stone, gardener to Archdeacon Haigh, The Close, Winchester, was second. Plants suitable for conservatory decoration are here specially cultivated. They are dwarf, not stiffly trained, and are specified to have not less than five blooms each. As a rule they are from 2ft to 4ft high, are furnished with magnificent blooms, and the best of foliage. For six, any colour or variety, Mr. G. Adams, gardener to Colonel F. A. Dickins, Edge Hill, Winchester, won the premier award with grand examples of Niveus, Lady Hanham, H. Weeks, Swanley Giant, and Ma Perfection. Mr. H. Gigg, gardener to Rev. R. M. Moorsom, Holyrood, Winchester, second. For six white flowered varieties, and for the same number of yellow, Messrs. Adams and Gigg occupied a similar position. Ma Perfection in the former and C. H. Curtis in the latter class were marvels of culture, the latter carrying sixteen handsome blooms.

As usual here, miscellaneous plants arranged for effect were a feature, helping to brighten up the room in which they were arranged. Mr. E. Long, gardener to F. C. Burch, Esq., Clovelly, Winchester, won the leading position with a splendid exhibit of Orchids, Palms, Crotons, &c. Mr. H. J. Pitman, gardener to the Hon. H. Sewell, Oakwood Lodge, Otterbourne, second. Mr. C. Dacre, gardener to Captain Crawford, R.N., Southgate Street, Winchester, third.

CUT BLOOMS were numerous and good, occupying the tables down the centre of the building. The principal class is for forty-eight distinct, half to be incurved and the remainder Japanese. Mr. J. Hughes, gardener to Messrs. A. Hart and Sons, Stoughton, Guildford, wrested from Mr. Neville, gardener to F. W. Flight, Esq., Twyford, Winchester, by the narrow margin of two-and-a-half points the leading award for handsome Japanese and even specimens of incurved. In the former Mrs. Barkley, Pride of Madford, Lord Ludlow, Lily Mountford, M. Louis Remy, Miss A. Byron, Australie, M. Chenon de Léché, Mrs. J. W. Barks, Mrs. C. H. Payne, H. Weeks, Jane Molyneux, Mrs. Mease, Mrs. Coombes, Sir H. Kitchener, Mme. Carnot, Mr. G. Palmer, C. Davis, M. Eustace Henry, Lady Hanham, President Bevan, Master Seymour, and H. P. Rivoire.

In the incurved section Princess of Wales, Miss V. Tomlin, Duchess of Fife, Topaze Orientale, La Marcedon, D. C. Kingston, J. Agate, G. Haigh, T. S. Bates, Mrs. Coleman, Mrs. N. Molyneux, Mrs. Gerald Williams, Miss D. Foster, Globe d'Or, Ialene, Emilie Nonin, Miss Annie Hills, Hanwell Glory, Yvonne Desblanc, Queen of England, Chrysantheme Bruante, Lady Isabel, Mme. Darrier, and C. H. Curtis. The second prize stand contained beautifully finished incurved, but somewhat weaker Japanese. Mr. Hall, gardener to Lady Louisa Ashburton, Romsey, was third. Thirty-six Japanese, in not less than twenty-four varieties, were contributed freely. Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sherfield Manor, Basingstoke, won the premier position with heavy blooms brightly coloured. Mr. Hall second; Mr. Mose, Belmont Nursery, third.

With substantial blooms Mr. Wasley again secured the principal award for twelve Japanese amongst the same number of exhibitors. Mr. Davies, gardener to Mrs. Ogilvie, Hambledon, a close second. A fairly good class was that for twelve white Japanese, in four varieties, three blooms of each, to be staged in vases. With Simplicity, Mme. Carnot, P. H. Rivoire, and Mrs. Weeks, Mr. Hughes secured the leading award. Mr. Neville second. Yellow flowered varieties were sparsely shown, Mr. Neville winning for twelve in four varieties.

Incurved varieties were quite good. Mr. Hughes won for twelve with well finished examples of Duchess of Fife, Mme. Darrier, Lucy Kendal, Lady Isabel, G. Haigh, R. C. Kingston, and C. H. Curtis. Mr. A. J. Marsh, gardener to M. Hodgson, Esq., Morton House, Kingsworthy, second. In the class for twelve in four varieties, the last-named two exhibitors shared the prizes in the same order of merit. Japanese varieties were creditably staged in the amateur division by Mr. E. Jarrow, North Walls, Winchester, and by Mr. S. Clifton, Clifton Road, Winchester, who ran the former quite close for the coveted award. Classes are provided for Japanese and Pompon varieties, to be staged in bunches and not disbudded, and quite an interesting feature of the show they made. Mr. W. Hunt, gardener to J. R.

Moss, Esq., Fern Hill, Blackwater, won first prize in each class with a capital display. Mr. Dawes a good second.

Table decoration and epergnes were a capital feature, and numerous are the classes here set apart for such exhibits. Miss Ayton, Twyford; Miss Nellie Owen, and Miss Wadmore, Basingstoke, were the most successful. The N.C.S. certificates were awarded to Mr. Street for his group of Chrysanthemum plants, and to Mr. W. Hunt for his collection of Pompons. J. S. Moss, Esq., Wintershill House, Bishop's Waltham, staged a magnificent group of Orchids, in which the rare *Cattleya aurea* figured in quantity. *C. labiata* was also a feature. Arranged, too, as they were, tastefully, much interest in this exhibit was evinced by the visitors who thronged the show. Mr. E. Hillier, The Nurseries, Winchester, had an imposing exhibit of Apples and Pears; the former were represented in huge baskets and dishes by such varieties as Hillier's Easter Orange, an Apple of much excellence, Golden Spire, Newton Wonder, Aromatic Russet, Fearn's Pippin, Cox's Orange Pippin, and King of the Pippins. Mr. B. Ladhams, The Nurseries, Shirley, Southampton, arranged an interesting collection of Alpine plants on a temporised rockery, which was much admired. A collection of cut blooms of herbaceous plants, too, added to the attraction of the show not a little.

Corn Exchange Chrysanthemum, November 11th.

It was, indeed, pleasant to pass out of the bustle of business and the somewhat murky atmosphere in Mark Lane into an upper room of the Corn Exchange and find there a pleasant show of Chrysanthemums, very largely of the Japanese type, contributed in certain classes by members of the Corn trade only, and in others by non-members of the Corn trade, who are amateurs. This show originated last year in a desire on the part of some gentlemen to pit their flowers against those of their neighbours, hence the formation of the society. There are two money prizes in each of the nine classes; in addition a handsome silver cup, subscribed for by the members, is offered for the best twelve blooms in the show. The arrangements were completed with commendable promptitude, and the awards were made by Mr. Richard Dean, the Secretary of the National Chrysanthemum Society.

In class 1 the best twelve Japanese came from F. W. Smith, Esq., Oatlands Park, Weybridge (H. Buckmaster, gardener), who had finely developed blooms of T. Carrington, Chas. Davis, Mrs. Mease, R. W. Church, G. J. Warren, Lily Mountford, Mrs. G. W. Palmer, Nellie Pockett, Lord Salisbury, Mrs. Barkley, Princess Brancovan, and Lily Davis. W. R. Clark, Esq., Loughton (F. King, gardener) was a good second, having well developed, even blooms. With twelve blooms and types, F. W. Smith, Esq., was again first; he had of Japs, G. J. Warren, Lady Hanham, W. R. Church, Le Grand Dragon, Nellie Pockett, Lord Salisbury, and Mrs. Barkley, all in fine character; and well developed examples of the following incurved: Mrs. H. J. Jones, Mrs. J. Bryant, Duchess of Fife, and Hanwell Glory, W. R. Clark, Esq., was again second. He had good blooms of incurved, Mary Mathews, Madame Ferlat, Chrysanthemiste Bruante, and Lady Isabel; and of Japs, Mrs. H. Weeks, Madame G. Henry, Jacob Holtzer, and others.

There was a good competition with six blooms of Japanese. The first prize went to T. Mason, Esq., Woodford Green (J. Bateman, gardener) who had, in excellent character, Mrs. Mease, Vivian Morel, Mrs. Coombes, M. Louis Remy, Nellie Pocett, and Henry Weeks. F. W. Smith, Esq., was second.

With six cut blooms of any types, F. W. Smith, Esq., was again first, having four Japs, viz., *Australie*, Vivian Morel, Henry Weeks, and T. Carrington; with Ralph Hatton and Ma Perfection, incurved. H. W. Butcher, Esq., Purley, took the second prize.

With twelve blooms of Japanese, distinct, there was a keen competition. F. S. Holland, Esq., Addlestone (J. Bateman, gardener) with finely developed blooms, admirably set up, the varieties *Australie*, *Phœbus*, Mrs. Barkley, *Simplicity*, Lord Salisbury, *Florène Molyneux*, W. R. Church, Mrs. W. Mease, T. Carrington, J. Thorneycroft, Nellie Pockett, and M. Chenon de Léché. This collection was awarded, in addition, the Silver Cup for the best twelve blooms in the show; and Nellie Pockett, represented by a highly finished bloom, was selected as the premier flower. Percy Waterer, Esq., Fawkham, was second, having some highly developed flowers, such as Lord Ludlow, Mrs. Barkley, Mrs. Mease, Mdle. G. Debie, George Mileham, Mrs. H. Weeks, &c.

With twelve blooms, any types, F. S. Holland, Esq., was again first, again having in fine character Madame Carnot, *Australie*, J. R. Upton, *Simplicity*, Mrs. W. Popham, Matthew Smith, *Florence Molyneux*, Mrs. Barkley, M. Chenon de Léché, Mrs. Coombes, Mr. G. W. Palmer, and Mrs. Mease. P. Waterer, Esq., was again a good second.

With six distinct Japanese, F. S. Holland, Esq., was again first, and H. Fergusson, Esq., second. But the latter came in

first with six blooms of any types, having, with the exception of one bloom, which was a little stale at the base, a half-dozen well developed incurved varieties, viz., Mrs. W. C. Egan, Mdle. Lucie Faure, *Ialine*, Duchess of Fife, C. H. Curtis, and Ma Perfection. F. S. Holland, Esq., was second with six Japs.

W. R. Clark, Esq., was placed first with six cut blooms arranged in a vase, and N. Sherwood, Esq., was second.

Some miscellaneous exhibits greatly helped the display. Madame Butchard had a vase of sprays of *Oncidium* and *Lilium speciosum*, of an elaborate and highly decorative character. Messrs. T. Tiffen and Co., sent bowls of Roses and glasses of beautiful Orchids. D. M. Grimwade, Esq., contributed handsome vases of valuable Orchids; Messrs. Ostle sent vases of Chrysanthemums, Mr. F. Burnes a stand of twenty-four specimen blooms of Japs; A. Pears, Esq., vases of Chrysanthemums; and E. H. Watts, Esq., sent a large dish of white Muscat and Alicante Grapes.

One main object sought by the promoters of this exhibition is to benefit the Benevolent Society in connection with the Corn Exchange. The show is open to the public, by payment, for a time; it is closed at half-past three o'clock, and then the flowers are sold by auction and the proceeds given to the Benevolent Society. Last year the sum of £50 was handed over by the treasurer, Mr. W. R. Clarke, who, with Mr. J. H. Mitchener, the hon. secretary, carried out the arrangements of the exhibition in a most satisfactory manner.

Devizes Benevolent Society's Chrys. Show, Nov. 12.

Devizes has a society which ministers to the necessities of the poor during the winter months, and it is customary to hold at this time of the year a Chrysanthemum show in conjunction with a bazaar for the benefit of the benevolent fund. One half of the Corn Exchange is occupied by exhibits in nine competitive classes, and the other half by stalls in which ladies sell various articles contributed by those charitably disposed. These stalls—eight in number—are all decorated with foliage and flowers in a very tasteful manner.

The centre of the space devoted to the Chrysanthemum show was occupied by four large circular groups of Chrysanthemums in pots, arranged with suitable foliage plants. The first prize went to a bold and striking group staged by Mr. H. Clack (gardener to C. E. Colston, Esq., M.P., Roundway Park), the second prize went to Mr. W. Oliver (gardener to the Marquise de Laval, Littleton Park), a third and extra prize were awarded.

In the twenty-four distinct varieties of incurved Chrysanthemums, Mr. W. Higgs, The Gardens, Fetcham Park, Leatherhead, was an easy first, staging some highly finished and even blooms of Frank Hammond, Mdle. Lucie Faure, Hanwell Glory, Duchess of Fife, Countess of Warwick, Lady Isabel, C. H. Curtis, Mrs. H. J. Jones, Louisa Giles, J. Agate, Ma Perfection, Bonnie Dundee (a perfect bloom), R. Petfield, Dorothy Foster, &c. Mr. F. Bible, The Gardens, Draycott House, was second with unnamed flowers; and Mr. G. W. Drake, Cardiff, third.

The class for twenty-four Japs brought an excellent competition, Mr. F. S. Vallis, Bromham, Chippenham, adding to his season's triumphs by taking the first prize with a stand of highly developed even blooms, which included the best Edwin Molyneux we have seen this season, Mrs. W. Mease, Le Grand Dragon, Madame J. Lewes, Matthew Smith, Madame P. Radaelli, Mrs. H. Weeks, T. Carrington, Madame Carnot, Calvat's Sun, W. R. Church, Suzie, Mrs. Bagnall Wild, Mrs. Barkley, G. J. Warren, Calvat's '99 (in fine character), Lord Salisbury, Nellie Pockett, Nelly Bean, *Phœbus*, Ethel Fitzroy, &c. Mr. F. Bible was second with a stand of fine, bright, and attractive blooms, chief among them Madame J. Lewis, Nellie Pockett, H. J. Jones, W. R. Church, Madame Cadbury, M. Louis Remy, Madame Gustave Henry, Mrs. Coombes, Mrs. Mileham, &c. Mr. G. W. Drake was third.

An unusual class was that for twelve blooms of Japanese, six white and six yellow. Mr. Vallis was again first, having very fine blooms of Madame Carnot and Madame J. Lewis, white; and G. J. Warren, yellow. Mr. Bible was second. He had Nellie Pockett and Madame J. Lewis, white; J. R. Upton and M. L. Remy, yellow.

The best twelve blooms of Japs in not less than six varieties, open to exhibitors in Wilts only, also came from Mr. Vallis, Mr. Bible coming in second.

There was but one exhibitor of twelve blooms of Anemone flowered, Mr. H. Clack taking the first prize, having in good character such leading varieties as *Enterprize*, Robin Adair, Halcyon, Clara Owen, John Bunyan, and Mrs. P. R. Dunn.

There was a class for a basket of hardy autumn foliage and berries, and as many as twenty-three were staged, young girls being in most cases the exhibitors. There were several charming arrangements among them.

Mr. Thomas King, of the Castle Gardens, is the manager of the show, and his arrangements were admirable.

Beckenham Horticultural Society.

Through the kindness of Messrs. Carter and Co. we were on Friday last privileged to listen to a lecture by Mr. E. St. J. Tucker on "Sweet-smelling Plants and Shrubs," with limelight illustrations. The lecturer first gave an historical sketch of the nations that attach so great importance to the uses of odorous herbs and trees, the various fragrant oils and resinous gums that are extracted therefrom, some of which are burned to give off their fragrance to the air, others for embalming the dead, and again others to anoint the body and perfume clothes, furniture, &c. A number of views from photographs were put on the screen, some illustrating successful cultures of Lavender (at Wallington in Surrey), Roses, Violets, Tuberoses, Narcissi (South of France), while others showed the gathering and preparing for scent extraction, as many as 350,000lbs weight of Rose petals being distilled daily through the month of May. Mr. Tucker also brought with him a large collection of seeds of aromatic plants, Fennel, Caraway, Lavender, Dill, &c.; scented woods, such as Sandal wood, Eucalyptus citriodora, Acacia pendula, Chinese Joss-stick. Some of this was burned in the room, creating a pleasing perfume—Patchouli leaves, Henna leaves, Tonquin Beans, Orris root, gums, Frankincense, Myrrh, Benzoin, Camphor, and many other substances, forming a most interesting and instructive display. Mr. Dowding moved a hearty vote of thanks to Mr. Tucker for his unique lecture. Mr. Pope, in supporting, regretted many more were not present, ladies included. They missed a treat.—T. C.

Birmingham Gardeners' Association.

The members of this society were recently treated to a highly interesting essay on "Landscape Gardening," by Mr. William Miller, The Nursery, Berkswell, near Coventry. The lecture was illustrated with a series of excellently executed and elaborate plans of pleasure grounds by the essayist himself. A comprehensive view of the grounds and gardens at Coombe Abbey, where Mr. Miller for upwards of thirty years was superintendent, was given. In addition to the foregoing, it may be also mentioned that the highly elaborate one he designed for a French nobleman, and which was "hung" at the Paris Exposition two years ago, in competition with others, was an object of much attention. Another design was that for a public park, and others for mansions and villa residences.

Bristol: Essay on "Lawns."

The third meeting of the winter session was held at St. John's Rooms on Thursday, November 7. Mr. Binfield occupied the chair. This was the evening appointed for the reading of the first prize essay on "Lawns and Pleasure Grounds," the prize given by the society and awarded to Mr. Gardner, of Redland, who deserves great credit for the practical way his paper was put together. In making a good lawn, much attention should be paid to drainage and to have the soil in good condition, thoroughly firm, with a fine friable surface, and not too wet. Rubble is preferable to pipes for draining. The fertility of the soil is a matter of great importance, as grass, being a fixed crop, needs just as much nourishment (or more so) as vegetables or any other crop. The best time for sowing the seed is between March and September, March to May being preferred. The seed should be evenly distributed, and this is best done by making two sowings. Rolling is essential for making a good even lawn. The scythe should be carefully used for new lawns until the turf is well formed and settled. Top-dressings of artificial manure are always beneficial. The proper and tasteful laying out of the pleasure ground is also of great importance, and herbaceous plants were strongly recommended for the beds and borders. Flowering shrubs are not planted as much as they deserve to be, said Mr. Gardner. Their flowers in the spring and summer months, and their foliage and fruit during the autumn, lend a charm to all gardens. Ornamental trees are an acquisition in the pleasure grounds if judiciously chosen and planted. The walks and drives should be kept free from weeds and moss by an application of one of the many weed-killers now on the market, nothing being more obnoxious than weedy paths and carriage drives. Mr. Gardner's paper was well worthy of the prize, and on the motion of the chairman was warmly congratulated on his success. Prizes, given by Mr. Brooke, for six Japanese Chrysanthemums were awarded to Messrs. Raikes, Jenkins, and Atwell. A special certificate of merit was recommended to Mr. Skinner for a fine lot of Crotons. The society's consulting entomologist, Mr. W. G. Smith, F.E.S., will at the next meeting, on the 28th inst., give a lecture on "Ants and their Ways," which will, no doubt, be an interesting one concerning these busy insects.

Croydon and District Mutual Improvement.

The usual fortnightly meeting was held on Monday evening, November 4, when there was a fair attendance. Mr. P. F. Bun-

yard occupied the chair. Mr. Maslen, Bramley Hill House, staged a nice collection of fruit. Mr. W. Wells brought up from Earlswood some grand blooms of Chrysanthemums, including the best novelties. The evening was devoted to "Questions and Discussions on November fruits and flowers," and among the subjects taken in hand was summer pruning and root-pruning of fruit trees, outdoor Grapes, &c. Chrysanthemums were in strong evidence upon the table. The queen of autumn flowers naturally received attention, questions of cultivation, &c., were discussed, and diseases, especially the "rust," were dealt with, and some good suggestions for remedies made. The questions and discussions were brief and to the point. Messrs. Humphreys, Glasscock, Collins, Bunyard, Wells, Maslen, Gregory, Boshier, &c., took part. To Mr. W. Wells and Mr. Maslen votes of thanks were voted on the proposition of the chairman; a similar compliment to the chairman concluded a very interesting evening. The next meeting will be held on November 19, subject: "Notes on the cultivation of Malmaison Carnations," by Mr. J. F. McLeod, gardener to G. Morgan, Esq., Dover House, Roehampton.—J. G.

Reading and District Gardeners' Association.

A new departure was made in connection with the fortnightly meeting of the association, held on the 4th inst. By arrangement with the authorities of the Reading College a lecture was given by Mr. Douglas A. Gilchrist, B.Sc., Edin. (Director of the Agricultural Department) in the lecture hall of the College on "Soils and Manures." Unfortunately, the fog which was prevalent prevented "country" members from attending, consequently the attendance was not so large as was expected. Mr. Leonard G. Sutton, the President of the association, presided. Mr. Gilchrist, in introducing his subject, said that he wished to bring before them two particular points: First, the supply of water to soils; and, secondly, the most economical way of manuring soils. The lecturer explained in an interesting manner the different classes of soils in the Reading district, their formation and cropping value, passing on to water in soils, the means of retaining moisture in soils, and finally referred to manures. The lecture was more easily followed on account of the excellent diagrams and maps placed before the audience, many of which had been specially made for the meeting. A discussion followed, in which the President, Messrs. Neve, Hinton, Dore, Alexander, Fry, and Wilson took part. Mr. F. Lever, The Gardens, Hillside, exhibited a beautifully flowered *Cattleya labiata*. Three new members were elected.

Wolverhampton Horticultural Club.

At the monthly winter meeting of this society, with Mr. J. F. Simpson (the chairman of the club) presiding, Mr. W. Gardiner, of Birmingham, by special request, read an essay on "Pear Culture," including also that published in the *Journal of Horticulture*, April 28, 1892, read by Mr. Fred M. Mole, Edgbaston, at a meeting of the Birmingham Gardeners' Association, as illustrative of cultivating the Pear near manufacturing towns like Birmingham. In the discussion that followed the chairman adverted to several of the numerous varieties of Pears under his own charge. Mr. Tom Dobbs (Messrs. Dobbs Bros., Wolverhampton) commented on the use of the Quince stock. The much-discussed question of the injurious or non-injurious action of galvanised wire when in close contact with the young branches of fruit trees was also raised, but nothing definite was elicited. Mr. Mole, however, in his essay, inductively appears to acknowledge the injurious effects of galvanised wire, by recommending it to be covered with two coats of paint, though he did not exactly say so.

Apple Bielo Borodawka.

We illustrate a new variety of Apple offered by Messrs. Geo. Bunyard and Co., of Maidstone, which is described in their catalogue as "a Russian novelty, medium in size, with flesh of a soft and aromatic flavour, rich, and a useful variety for dessert." On Dwarfs it is a regular and heavy bearer, which points of merit our figure justifies. It somewhat resembles a Duchess of Oldenburg in colour and shape, but ripens later in September, and is firmer.

Quassine on Trial!

I should feel ever so grateful to you (writes a New Zealand reader) for a trial sample of the insect-destroying preparation, Quassine, recently referred to in the *Journal*. Should you be pleased to send it to me at once, by the time it reaches me vegetable pests will be rife here, and I should like ever so much to give the Quassine a trial. If it comes near the mark I shall not fail to make its qualities known in the Colony, where it should have a great sale.—A. J. L.



Hardy Fruit Garden.

CURRENTS.—Red and White Currants require exactly the same methods of cultivation. As bushes, establish them in rows 6ft apart, and give a similar distance between the bushes in the row. The soil must be deeply worked and liberally manured. To each bush a number of main branches must be originated, and these only allowed to extend. The side shoots upon them must be pruned back to three pairs of leaves in summer, and shortened to half an inch in winter, the leading growth also being pruned to a length of 9in at the winter pruning. Of course, when the branch has grown of sufficient length, it must be closely shortened each season. Cordon culture is also suitable for these Currants, either on walls, fences, or wires. Plant at a similar



APPLE BIELO BORODAWKA.

distance, and treat the same in pruning as Gooseberries. On north walls the fruit will hang in good condition quite late in the season.

Black Currants require to be cultivated in a freer style, as they bear chiefly on the young and vigorous growths. Bush culture, therefore, is the best in every respect. Give them ample room, 6ft distance sufficing. As the growths extend, thin them out and regulate, but do not shorten. Wood that it is necessary to remove should be cut at a junction with another branch. The pruning, in short, consists of removing old wood and training or giving room for new. Varieties of Red Currants may comprise La Fertile, Red Dutch, and Raby Castle. Of White Currants the best is White Dutch. Lee's Prolific Black and Black Naples are excellent Black Currants.

RASPBERRIES.—Sucker growths, not necessarily with strong canes, but having abundance of fibrous roots, may be planted now. The canes should be cut down closely before growth commences in spring. Raspberries need rich, fertile, deeply worked soil, in order to encourage strong growths for the

next season's fruiting. Cut them down after the fruiting is over. Wires or stakes are needed to support the canes. It is most convenient, therefore, to plant in lines 5ft apart, the plants being given a foot distance in the lines. From each stool several strong canes will ultimately be produced. They should be spread out upon the wires, which must be stretched along the rows to upright posts at each end 5ft high. Another method is to plant 3ft apart, and to each stool place a strong stake 4ft out of the ground, and train round it four to six strong canes. Shorten all canes at the winter pruning to the top of the wires or stakes. Carter's Prolific and Superlative are good varieties.

GOOSEBERRIES.—A good selection of Gooseberries for bush or cordon culture may comprise Crown Bob, Ironmonger, Warrington, and Whinham's Industry, red varieties. Golden Drop, Smuggler, and Gipsy Queen, yellow varieties. Eagle, Jenny Lind, and Whitesmith, white varieties. Leveller, Green London, Gretna Green, and Profit, green varieties. Gooseberries may be grown as free bushes, leaving plenty of young growths each season, but where the trees or bushes grow naturally compact, and form natural fruit spurs, less of the current year's growths may be retained; indeed, on such bushes fewer will be produced. Grown as bushes, plant 5ft or 6ft apart in rows the same distances asunder. Where a north wall is available, Gooseberries are suitable fruits to establish upon them, growing them as cordons, either single or double upright cordons. In this manner with good culture and regular attention in summer and autumn pruning, excellent crops are obtained, which come in in succession to bush trees. On walls, birds are not near so troublesome in picking out the buds as they are on bush trees. In addition to training on walls and fences, they can be grown on wires in the open. Plant 18in apart, taking up three stems 6in asunder. Pinch the side growths in June, and shorten to basal buds in winter. This is an interesting method of growing Gooseberries.—LYMINGTON, HANTS.

Fruit Forcing.

PEACHES AND NECTARINES—EARLIEST HOUSE.—The trees must be started to ripen the fruit early in May, when the varieties consist of Hale's Early, Stirling Castle, Royal George, Dymond and Bellegarde Peaches, Lord Napier, Stanwick Elruge, and Humboldt Nectarines. The very early varieties, such as Waterloo, Early Louise, and Condor Peaches, with Cardinal and Early Rivers Nectarines, need not be started until the new year. If the lights have been off, the inside border will have been thoroughly moistened down to the drainage. Weakly trees will be benefited by an application of liquid manure. Fire heat need only be employed at night to exclude frost, and by day to ensure a temperature of 50 degrees. Commence ventilating at 50 degrees, and close the house at that temperature, ventilating fully without lowering the heat below 50 degrees in the daytime. Syringe the trees in the morning and early afternoon of fine days, until the buds begin to show colour; but then (and on dull days prior thereto) discontinue the syringing, yet maintain a suitable moisture in the atmosphere by damping the paths, borders, and similar surfaces on bright mornings and fine afternoons, admitting a little air constantly at the top of the house. Aim at bringing the trees on gradually to secure well developed blossoms.

HOUSES STARTED AT THE NEW YEAR.—Trees started at the new year for affording fruit at the end of May or early in June, must be kept as cool as possible. Pruning will have been attended to, this being a light affair where proper attention has been given to disbudding, retaining only growths essential for extension and next year's bearing, and cutting out after the fruit is gathered the useless wood. The trees, however, must be examined to remove wood not required, and that have been overlooked during growth. Dress the trees with an insecticide. Secure the trees to the trellis, allowing plenty of space in the tree for the swelling of the branches. Remove any inert loose soil from the surface of the borders, supplying fresh material not more than a couple of inches thick on the roots. Quickly acting fertilisers should not be used until the crop has set, a dressing then given at intervals of a month or six weeks up to the fruit changing for ripening. Mulching also with short manure should be deferred until the trees are somewhat in growth. Houses with fixed roof-lights should be kept as cool as possible, ventilating to the fullest extent except when severe frost prevails.

HOUSES FOR STARTING IN FEBRUARY.—The trees started early in that month ripen the fruit late in June or early in July, and will now require similar treatment to that advised for the house to be started at the new year. The roof-lights are much better removed, but it is a common practice to use houses of this kind for plants requiring protection from frost, especially Chrysanthemums. It is not a good procedure, for the Peach trees are deprived of the rest essential to success, and it often excites the trees prematurely, being then followed by a check, as is usually caused when the Chrysanthemums are over by throwing the house open, inducing the buds to fall. It is also a bad system to leave houses and trees unattended after the leaves fall until the absolute necessity arises for starting the trees.

The trees are never so safely handled as when the wood contains least sap, which is as soon as the leaves have fallen, and the delay is taken advantage of by red spider, thrips, and other insect pests to find safe retreats. The house, therefore, should be thoroughly cleansed, the trees pruned, readjusted to the trellis, and every needful operation performed, so that a start can be made with confidence when the proper time arrives.

HOUSES STARTED IN MARCH.—The trees in these structures, and closed early in March, will ripen their fruit in July if brought forward by artificial heat; but where warmth is given when the trees are in blossom, and to secure the safety of the young fruit from frost, the fruit will not ripen until August or September if kept cool. The house may be a Peach case or glass-covered wall, with sufficient hot-water piping to exclude frost; afford a genial warmth when the trees are in blossom, accelerating the ripening as may be necessary, and ripening the wood in cool districts. The trees are now leafless where they have been subjected to artificial heat to ripen the fruit in August, and should undergo the operations advised for those in the early house. The roof-lights should be removed, the hot-water pipes emptied, leaving the lights off until the blossoms show colour, unless it is desired to start the trees before. If the roof-lights are fixed, the ventilators should be thrown open to the fullest extent, except when frost prevails.

LATE HOUSES.—Make no attempt to remove the leaves until they part readily from the trees by shaking them or the trellis, but cut out all the wood that has borne fruit, not being extensions, and all superfluous growths. Do not allow the soil to become very dry, but, if necessary, give water to moisten down to the drainage. Keep the house cool by free ventilation, clearing away the leaves as they fall. Trees that grow too luxuriantly should be root-pruned and lifted whilst the leaves are upon



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

MOVING SMALL TREES (J. L. F.).—Your request is what many, no doubt, would like an answer to: "What can I have to assist me in transporting small trees?" The accompanying figure shows a very useful tree-moving machine. The outline at the right-hand side shows the stage for carrying the ball of soil. The central upright beam is of Larch. Two cross-pieces and a 9-in board, laid parallel to and level with the top side of the pole, will form a sufficiently strong stage. The thick end of the beam should be squared to make it lie better and to facilitate the fitting of the supporting bars. Anyone having an old mowing machine and having planting to do, cannot possibly turn it to better account than use it for this purpose. Two men and perhaps a lad can move shrubs 8ft to 10ft high with great expedition by such aid. The shrubs can be prepared in the ordinary way, the ball tilted on its side, the machine then being brought forward, with the rollers close to the edge of the hole. The end of the stage can then be slipped under the ball by raising the handles. The shrub is conveyed either uprightly or horizontally, and deposited as easily as it was lifted.

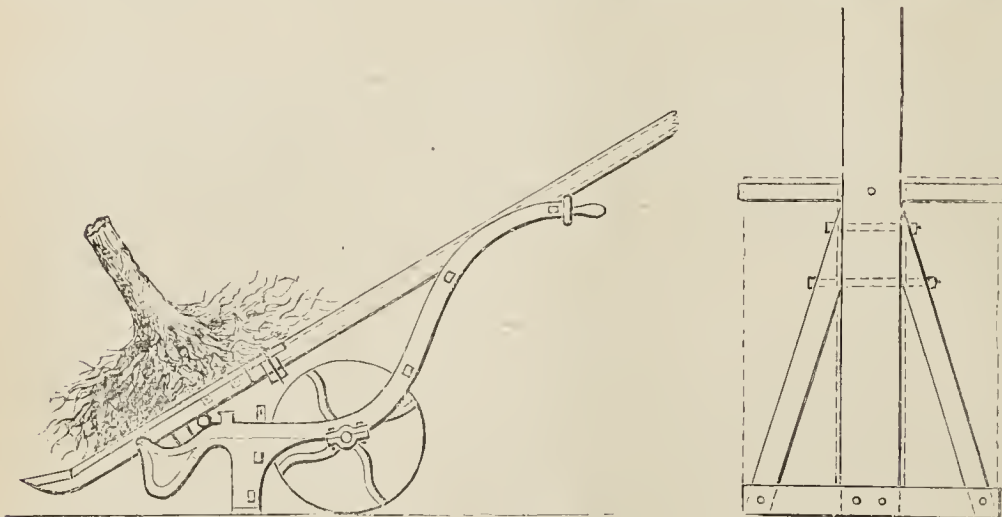
INSECTS FOR OPINION (L. S.).—The insects are the beetles popularly known as "Ladybirds," and the particular species is known to entomologists as *Coccinella dispar*. It feeds (especially in the larval stage) voraciously on Aphides. So far from being harmful, the "Ladybirds" are of great assistance to foresters, farmers, and gardeners, and should by all means be protected, especially when they appear in vast swarms, which frequently follow on a special outbreak of Aphides, and in which, to the great injury of cultivators, they are liable to be swept up and destroyed. The "Ladybirds" congregate in autumn, as you have observed, and shelter in various warm quarters, frequently indoors, even in dwelling-houses. In a semi-dormant state they pass the winter, and from these quarters come out about the middle of April, earlier or later according to season and locality. They instinctively find out plants, shrubs, and trees infested in the young growths with Aphides, and deposit eggs amid the Aphis hosts, and the larvæ from these eggs feed, as soon as hatched, voraciously on the Aphides for a fortnight or three weeks, then change to pupæ, curiously hung up by the tails, and from this stage the Ladybirds appear in about another fortnight or three weeks. Thus there are several broods in a season, and they work incessantly from spring to autumn in the best interests of horticulturists.

GAS STOVE IN GREENHOUSE (Ryde).—If, as you describe, all the fumes arising from the burning of the gas are conveyed by a pipe into the outside air, the stove may be safely used.

WIDENING VINE BORDER (Moonshine).—You may add another yard to the Vine border now. It will not injure but improve the succeeding crop. By all means place the Strawberries for forcing on the shelves in the cool vinery, especially if they are to be forced early. You may stack them outside if you do not want to force them much, but they will ripen their buds much better in the cold vinery.

PLANTING EVERGREENS (J. H.).—Spruces and such fibrous-rooted sorts as the Arbor Vitæ and Retinosporas if taken up now and reset in the same way, would stand a very good chance of living, but those evergreens with but few small roots, such as most all Pines, had much better not be planted at this time. If well-rooted evergreens, like the Hemlock, Spruce, and Arbor Vitæ, can be got into fresh positions now, they do very well.

HOLES IN RHODODENDRON LEAVES (E. W.).—The leaves on the shoots enclosed are eaten or punctured through by the larvæ of some insect, but what that has been we are unable to tell. Ants have nothing to do with the mischief. Had you looked at the Rhododendron foliage in July and August you would have found a dusky-looking caterpillar, about three-quarters of an inch in length, feeding on the then succulent leaves; and had it been picked off with the hand and destroyed, the mischief would, to a certain extent, have been mitigated.



A LIGHT TREE-MOVING MACHINE.

them, but the wood being unripe, they must not be lifted until the leaves have for the most part fallen, or the unripe wood will shrivel and die. If the wood does not ripen well, turn on the heat by day with moderate ventilation, and turn it off in the afternoon, so as to have the pipes cool before night, and then open all the ventilators, unless frost prevails, when ventilate according to circumstances, for the sudden collapse of the foliage is detrimental to the tree's health. When the wood does not ripen up to the points of the shoots, a trench may be taken out at some distance from the stem, and the roots be cut, which will check the tendency to growth, and induce ripening. After remaining open ten days to a fortnight, the trenches may be closed, making the soil firm, and giving a good watering.

UNHEATED HOUSES.—Although the trees are generally, they are not always satisfactory. Sometimes the border is at fault, and the trees make late growth, not ripening the wood well. Where that occurs the trees should be lifted, and the roots laid in fresh compost nearer the surface. If the drainage is not good it should be rectified, and the soil being unsuitable, it should be removed wholly or in part, supplying or adding fresh. If new trees are to be put in, select those just coming into bearing, say two or three years trained to walls, and lifted in the year previous to moving. Carefully lifted and planted they will bear fruit the first season, and not being overcropped, will not materially be hindered in extension. Introducing new trees, and the lifting and replanting of Peaches and Nectarines, should be effected as soon as the trees are leafless, or nearly so, as upon early removal depends success in the following year.—ST. ALBANS.

Trade Catalogue Received.

Little and Ballantyne, Carlisle.—Trees, Forest and Ornamental. Roses, Shrubs, Herbaceous and Greenhouse Plants.

PEARS (G. I. L.).—Six Pears for your walls, to ripen from October to March, may be Beurré Diel, Beurré Rance, Glou Morceau, Passe Colmar, Ne Plus Meuris, and Winter Nelis.

STOVE PLANTS WITH YELLOW FLOWERS—EVER-GREENS FOR SMOKY LOCALITIES (Constant Reader).—Allamanda cathartica, grandiflora, neriifolia, and Schotti; Impatiens Jerdoniæ which has yellow in the flowers; Hibiscus lutea plena; Strelitzia reginæ; and Hexacentris lutea. The most suitable shrubs are Rhododendrons of sorts, Aucuba japonica, and Hollies. Of smaller shrubs the very pretty Pernettya mucronata, Andromeda floribunda, Heaths, Kalmias, Ledums, and Berberis Darwini. Most annuals do well; and of biennials or plants treated as such, the Wallflower is pre-eminent for spring, and Canterbury Bells for early summer; and Sweet Williams are invaluable. To give you full information on all that relates to the management of smoky gardens, would take more space and time than we can at present devote to it.

CHRYSANTHEMUM LEAVES DISEASED (Florist).—The growths are infested by the Chrysanthemum leaf blight, which is caused by a fungus named Cylindrosporium Chrysanthemi. It produces large dark blotches on the leaves, which turn yellow or brown and shrivel. The disease attacks the leaves in order, from the base of the plant upwards, and the diseased leaves hang down and lie close to the stem. Anon, numerous fruiting pustules are formed on the diseased patches; these produce a vast number of long, narrowly spindle or club shaped, colourless, septate conidia or spores, which rupture the epidermis of the leaf, and spread the disease rapidly. Against this disease spraying with fungicides has not had any apparent effect, therefore we can only advise removing the affected leaves and burning them, this being attended to as soon as they are seen to be affected. The disease is very pernicious in its effects, completely spoiling the appearance of the plants, and when badly attacked the flower buds do not expand.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. M. Astle).—1. Nerine undulata; 2. Cupressus probably, but it does not appear to be in its true character, and is not recognised. (L. F.).—1. Cotoneaster frigida; 2. Hedera Helix maderiensis; 3. Polygonum lanigerum; 4. Plumbago Larpentæ. (J. Mead).—1. Euonymus europæus; 2. Euonymus radicans variegata. (L. N.).—Begonia coccinea. (A. B. Newport).—A fine sample of Cestrum aurantiacum. (J. I.).—1. Veronica imperialis; 2. Cattleya labiata aurea.

Covent Garden Market.—November 13th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, case	24 0	to 30 0
„ dessert	3 0	6 0	Melons, each	0 0	0 0
Bananas	8 0	12 0	Pears, English, ½ sieve	6 0	8 0
Figs, green, doz. ...	1 6	2 0	Pears, French, crate ...	4 0	9 0
Grapes, Alicante, lb. ...	0 9	1 0	Pines, St. Michael's,		
„ Colman	0 8	1 6	each	2 6	4 6
„ Hamburgh	0 0	0 0	Plums, ½ sieve	0 0	0 0
„ Muscat	1 0	2 0	Walnuts, ½ sieve	2 0	3 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Horseradish, bunch ...	1 0	to 0 0
„ Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 1½	0 2
Batavia, doz.	2 0	0 0	Lettuce, Cos, doz. ...	0 0	2 0
Beans, French, per lb.	0 8	0 9	Mushrooms, forced, lb.	0 6	0 8
Beet, red, doz.	0 6	0 0	Mustard & Cress, pmt.	0 2	0 0
Brussels Sprouts, ½ sieve	2 0	2 3	Parsley, doz. bnchs ...	2 0	3 0
Cabbages, tally	1 6	3 0	Potatoes, English, cwt.	3 0	4 0
Carrots, doz. buch. ...	2 0	2 6	Radishes, doz.	0 6	0 9
Cauliflower, tally ...	4 0	6 0	Shallots, lb.	0 2	0 3
Corn Salad, strike ...	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	3 0	4 0	Tomatoes, English, lb.	0 3	0 4
Endive, doz.	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Ferns, var, doz.	4 0	to 18 0
Araucaria, doz.	12 0	30 0	Ferns, small, 100... ..	10 0	16 0
Aspidistra, doz.	18 0	36 0	Ficus elastica, doz. ...	9 0	12 0
Chrysanthemums, doz.	6 0	30 0	Foliage plants, var. each	1 0	5 0
Crotons, doz.	18 0	30 0	Lycopodiums, doz. ...	3 0	0 0
Cyclamen, doz.	10 0	12 0	Marguerite Daisy, doz.	6 0	8 0
Dracæna, var., doz. ...	12 0	30 0	Myrtles, doz.	6 0	9 0
Dracæna, viridis, doz.	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
Erica gracilis, doz. ...	10 0	12 0	„ specimen	21 0	63 0
„ caffra, doz.	15 0	18 0	Primulas	3 0	4 0
„ hyemalis	9 0	15 0	Shrubs, in pots	4 0	6 0
„ „ alba	12 0	18 0	Solanums	8 0	10 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	5 0	to 6 0	Lilium l. rubrum	1 6	to 2 0
Asparagus, Fern, bnch.	1 0	2 0	Lilium longiflorum ...	3 0	4 0
Bouvardia, white,			Lily of the Valley, 12		
doz. bunches	4 0	6 0	bnchs	12 0	18 0
Bouvardia, coloured,			Maidenhair Fern, doz.		
doz. bunches	4 0	6 0	bnchs.	4 0	6 0
Camellias, white	3 0	0 0	Marguerites, white,		
Carnations, 12 blooms	1 0	1 3	doz. bnchs.	1 0	2 0
Cattleyas, doz.	8 0	12 0	„ yellow, doz. bnchs.	0 6	1 0
Chrysanthemums,			Odontoglossums	5 0	6 0
specimen blooms,			Primula, double white,		
doz.	1 0	4 0	doz. bunches	5 0	6 0
„ white, doz. bnchs.	2 0	8 0	Roses, Niphetos, white,		
„ coloured, doz. bnchs	2 0	8 0	doz.	1 0	2 0
Cypripediums, doz. ...	3 0	4 0	„ pink, doz.	2 0	4 0
Eucharis, doz.	4 0	5 0	„ yellow, doz. (Perles)	1 6	2 0
Gardenias, doz.	2 6	3 0	„ red, doz.	0 0	0 0
Geranium, scarlet, doz.			Smilax, bnch	1 0	2 6
bnchs.	4 0	5 0	Stephanotis, doz. ...	0 0	0 0
Hyacinth, Roman,			Tuberoses, gross	3 0	4 0
doz. bunches	9 0	10 0	Violets, single, doz ...	1 6	2 0
Lilium lancifolium alb.	2 0	2 6	„ double, doz.	3 0	4 0



Maize.

Maize in all its beauty.
With its shining robes about it
And its long soft yellow tresses.
"MONDAMIN."—Longfellow.

Those of us who take any interest whatever in our own system of housekeeping will often hear complaints from the genius who presides over things culinary as to the difficulty of providing new and acceptable dishes to vary the monotony of the diet. How delightful, for instance, it would be if some new form of animal food were introduced—say, after the game season, when lamb and veal are dear, or late in summer when beef and mutton are still tough and lamb begins to pall. Perhaps one may say it is only pandering to the appetite to desire such constant change. Of course, the desire for novelty may be carried too far; but, all the same, we know a healthy state of body is best maintained by the use of a varied diet. There are other reasons which make a varied diet desirable—reasons of economy—and these reasons appeal strongly to the man who has a great quantity of live stock. How to have food enough and to spare—good, nutritious, and appetising, and, at the same time, cheap—is a problem we farmers all have to solve, not occasionally, but for ever. The problem is ever presenting itself to us in a new form. The bumper crop of one year is seldom the bumper crop of the next, and with all the judgment and forethought in the world we find it most difficult to ensure a plentiful supply of any one form of food ration. Are we making ourselves quite clear to our readers? Some will be inclined to question this statement, and will certainly say, "Does not the grass grow afresh every spring and afford a bountiful supply of food?" Possibly it may; at any rate, we have cause to expect it; but what if the spring, as has been the case lately, is cold and abnormally dry? What chance has the grass to grow? and does not every bit get nipped up before it can get to any size? We know this is the case. The same with seed pastures. A dry summer makes germination uncertain; strong frosts, without a covering of snow, kill the weakly plants; a late spring retards growth, and so on.

The same applies to the root crops. How many times this year have Turnips been drilled and redrilled? and what of the hay crop? When we hear now in November of hay been sold for £5 17s. 6d. per ton, the question answers itself. The same with straw at 60s. per ton. Straw is as

dear as the proverbial Mint, and it is a long time before next harvest. It has often been a cause of complaint that the farmer's methods are not elastic enough—that he does not rise to emergencies, that he is slow to try the new. We grant that he has not much of the speculator about him. He does not like running risks; but sometimes we do think he would be wise to diverge a little from the beaten track.

We may be wrong, and for some things we hope we are; but we seem to have arrived at a cycle of dry, hot summers, when we may fairly expect that a crop of Maize might be grown to come to some sort of maturity. We do not for a moment intend that it should be cultivated in place of a grain crop, for we doubt if the grain would ever thoroughly ripen; but we do contend that it would make a most excellent forage crop, either eaten green or made into hay. Most of our readers well know that Maize is a plant that will withstand a great amount of drought, or, rather, we should say, rejoices in drought—that is, if the land be in good heart. It is a curious fact, a provision of Nature, that the two great cereal crops, Wheat and Maize, have a very wide range, and also that a drought that fatally injures other crops, only adds to their fertility. Many of us know, to our cost, what a job it has been this last summer to supply our milk cows with as much green food as they needed. The pastures were exhausted long before their time, and heavy demands were made on all our stock of forage food. One farmer in Worcestershire (which we hardly class as a southern county) has grown Maize this season which reached a height of 6ft, and failing other green food for his dairy cows, gave them this Maize, which had the effect of keeping up the supply of milk during a long and trying period.

What has been done once can be done again. We have heard of great breadths sown in Essex that have yielded heavy returns, and we have seen fine plants this year in one of the more northerly counties. When all has been bare and dry, what a comfort to have a piece of green stuff that will stand a good bit of cut-and-come-again. There are so many varieties of the grain, that some, we think, could be easily made to adapt themselves to the exigencies of the English climate. Here is a chance for the Suttons, Webbs, Carters, and Gartons to try their hand. Quick growth and big bulk is what we want. Although we believe that even as things stand now, seed planted from May 15 to May 30 will be found ready for use in August, just the time when there is often a great lack of other food. Made into hay—there need be no worry about the weather, as a little rain will not hurt it. Preserved wet it would hardly rank as hay, but be styled ensilage. One question occurs to us, and it is this: Will it be too exhaustive a crop for the land? Six feet of growth needs some support; but, at any rate, 6ft of growth would effectually smother all weed life. We should be inclined to think that such a crop, such weight per acre, well worth paying for in the extra dressing needed for the following crop.

The Kentish plan of sowing Maize is broad-casting, and we should personally prefer this to drilling. We should get a greater quantity of stems on a given piece of ground, and the stems would be smaller and finer in quality, and hence more appreciated by stock. Coarse, woody fibre is to be avoided in all growths. We fancy there is another little difficulty about Maize cultivation—the ubiquitous crow. We feel sure, if there are any rookeries in the neighbourhood of the newly-sown field, Master Rook will be there, and will also issue invitations to his friends. (We shall have a word to say on the rook question before long. In some districts he has become a perfect pest; indeed, a Black Plague.)

Now, as to the right sort of land. Well, a general rule is wanted, and a man will be quite safe if he takes typical Wheat land—land that will grow five quarters per acre, and for the learner we will add that land will not include light soils, gravels, or chalks. There must be some body in the land, and farmyard muck, helped out with superphosphates. We have heard of forty tons per acre grown in England, and this on very good authority; but we ourselves should be content with much less. We do not consider this paper is addressed to our northern readers. Their need is not so great, and, as a rule, they are fairly well supplied with forage plants and good roots. We are speaking for those whose patience has been tried, and purses emptied, by a succession of hot, dry seasons. We do not advise any heroic efforts at first in Maize growing—a small plot, just as a trial trip. We remember the rage there was at one time for Comfrey, it was going to solve all difficulties; but, unfortunately,

although it grew well and gave splendid returns, an animal had to be very hungry indeed before it would eat it! Indeed, we heard that even an old sow refused the delicacy unless “clemmed” for a day or two before.

Now, just one last word to the young and zealous, but ignorant, disciple. He asks, “Where would you advise me to sow Maize? In place of what other crop?” Our answer is: late sown Barley never answers, and it is possible and probable that there will be a patch of Turnips, the last to be eaten off. If the said Turnips have been a good crop, the land will be in first rate condition, and there you may try your experiment. As the Maize is cut early, the land should be worked as soon as possible, and being so perfectly clean will probably be fit for your earliest sowing of Wheat in the autumn. Should you have some muck to spare, put some on; otherwise, help the Wheat later, that is, in the next spring (1903) if you see any sign of weakness. We do not think the Wheat crop will suffer, and with a good cut of Maize you will have got your bird safe in the hand.

Work on the Home Farm.

Fog! Thick fog! The ploughboy can hardly see his horses, and simply follows the furrow. The setting out of new ridges is an impossibility until the fog clears. In a thick mist with a strong frosty rime the ploughman's lot is anything but poetic. He is supposed to be working to the accompaniment of the music of the lark, and, though we heard this bird trilling three weeks ago at 6 a.m. he surely must now be silent with such a fog in his throat.

The question which is now most exercising our minds is that of hiring our Martinmas servants. Are they to be obtainable at less money, the old wages, or at all? The farm balance-sheet suggests the necessity for economy. But will the servants be at the hirings? And will they see the force of our argument?

The conditions of the late Wheat drilling have been more satisfactory than the early ones. The land has not been devoid of dryness; but the surface, under the influence of dense fogs, has been sticky, and the seedbed for early weeds therefore spoiled.

There is no diminution of the trouble with foreign larks, which migrate to this country in October. The fields of newly-sown Wheat simply swarm with them, and if they are disturbed they adjourn for a few minutes to an adjoining field, only to return as soon as all is quiet. They feed on the young half-sprouted Wheat, which is like a sac of sweet milk. We have ourselves killed as many as seven at one shot, and tried them cooked in various ways, but we should not consider them worth powder except as regards the riddance of a pest. We found them, almost without exception, to have been feeding on seed Wheat in different stages of development.

Mangold are all stored, and a fine crop they are. A two-acre plot we estimate to have produced at least 100 tons. Forty-six yards of ten-foot pie should surely represent no less. Swedes must soon be taken care of. Some are still growing, but all the early sown ones would look better under a covering of soil. (No bull intended.) When roots have suffered as much from mildew as this year's Swede crop has done, they never stand much frost if unprotected. We like to store those wanted for cattle food in big heaps, the same as we put Mangold in. But how about a covering? Well! little covering is needed except soil, and if the ditches have all been cleaned out a sufficiency of rough grass from the sides will have been cut to provide a good covering for all the Swedes we are likely to possess this winter.

ROYAL COUNTIES' AGRICULTURAL SOCIETY.—The 1902 Show will be held at Reading, on June 10, 11, 12, and 13.—Franklin Simmons, Secretary, Basingstoke.

RUSSIAN HOPS.—A Vienna Correspondent states that, according to the “Arbeit,” samples of Russian Hops were last year sent to breweries in Great Britain, France, Holland, Sweden, and Norway. The result has been that Russia has begun to export considerable quantities of Hops to those countries. The Russian Ministry of Agriculture took the initiative in forming these new commercial connections.

GERMAN HARVEST PROSPECTS.—The Berlin agricultural paper, “Getreidemarkt,” calculates, on the strength of five thousand inquiries made in the different States and in various districts of the country, the yield of this year's harvest in Germany as follows:—Wheat, 2,470,000 tons; Rye, 8,145,000 tons; Summer Barley, 3,021,860 tons; and Oats, 7,105,000 tons. As compared with the official crop estimated for 1900, the above figures would show a reduction of 1,837,560 tons for Wheat and 405,200 tons for Rye, while indicating an increase of 265,000 tons for Oats and 20,000 tons for Barley. Reckoned on the basis of last year's figures, Germany would have to import for the current harvest year 3,000,000 tons of Wheat and 1,000,000 tons of Rye.



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Trees for Avenue and Park Planting	Oaks, Chestnuts, Beech, Birch, &c.
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happy to make selections suitable for any soil
or situation that our customers may be
desirous of planting.

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Amorpha fruticosa, 9d. and 1/- each; 6/- and 9/-
per doz.
Arbutus, in variety, 1/6, 2/6, and 3/6 each.
Azaras, in variety, 1/-, 1/6, and 2/6 each.
Berberis Darwinii, 9d., 1/-, and 1/6 each; 15/- to
40/- per 100.
Berberis japonica, 1/- and 1/6 each.
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per doz.
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each.
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each; 9/- to 36/- per doz.
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2/6 each
Garagana, in variety, 6d. to 2/6 each; 5/- to 36/-
per doz.
Caryopteris mastacanthus, 1/6 and 2/6 each.
Chimonanthus fragrans and **grandiflorus**,
1/6 and 2/6 each.
Chionanthus virginicus, 1/6 to 3/6 each; 15/- to
36/- per doz.
Choisya ternata, 1/6 to 2/6 each; 15/- to 24/- per
doz.
Cistus ladaniferus, 1/6 and 2/6 each.
Clerodendron foetidum roseum and **tricho-**
tomum, 1/6 to 2/6 each.
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Cornus, choice and rare varieties, from 1/6 upwards.
Coronilla Emerus (Scorpion Senna), 1/6 and 2/6
each.
Cotoneasters, choice species, 1s. and upwards each.
Crataegus pyracantha, **fructo lutea**, and
Lelandi, 1/- to 2/6 each; 9/- to 24/- per doz.
Cydonia (Pyrus) in choice varieties, 1/6 to 3/6 each;
12/- to 24/- per doz.
Cytisus albus (White Broom), in pots, 9d. and 1/-
each.
Cytisus præcox, 1/6 to 2/6 each; Standards, 4 to 6 ft.
stems, 2/6 to 5/6 each.
Cytisus scoparius Andreanus, 1/6 to 3/6 each;
24/- to 40/- per doz.
Daphne, choice and rare varieties; 1/- to 2/6 each;
9/- and 24/- per doz.
Daphniphyllum glaucescens, in pots, 1/6 to 5/-
each; from open ground, 24/- to 30/- per doz.
Deutzias, in variety, 6d. to 2/6 each; 4/6 to 24/- per
doz.
Elæagnus, in every variety, 1/6 and 2/6 each.
Escallonia, in variety, 1/6 to 2/6 each.
Euonymus, the choicest varieties, 9d., 1/-, and 1/6
each; 6/-, 9/-, and 12/- per doz.
Forsythias, in variety, 1/- and 1/6 each; 9/- and 12/-
per doz.
Garrya elliptica and **Thuretii**, 1/6 and 2/6 each.
Griselinia littoralis and **macrophylla**, 1/6 and
2/6 each.
Hamamelis, in variety, 1/6 to 5/- each.
Hibiscus syriacus, in choice variety, 1/- and 1/6
each.
Kerria japonica and varieties, 9d. to 1/6 each
Ligustrum, in variety, 6d. and upwards each,
Special prices for large quantities.

For choice varieties of Japanese Maples,
Myricas, Olearias, Osmanthus, Philadelphus,
Phillyrea, Rhus, Ribes, Sambucus, Spiraea,
Syringa, Veronicas, Viburnum, Weigela, and
all other beautiful and interesting shrubs,
see our

TREE & SHRUB CATALOGUE.

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Altrincham & Manchester



Journal of Horticulture.

THURSDAY, NOVEMBER 21, 1901.

The Chrysanthemum Season.

WE are now in the very thick of
the Chrysanthemum season;
the flowers of Chrysanthemums
abound everywhere; in our
glass houses, on warm and sunny
walls in the open, in the flower
shops, and in our streets the
itinerant flower-seller vends them, and
many a passer-by, struck with their
brilliance, purchases a bunch to brighten the
home. It is doubtful if all this happy plente-
ousness of floral wealth would have been ours
if Robert Fortune had not, in 1862, on his
second visit to the Extreme Orient, introduced
several varieties he, after immense labour,
obtained in Japan.

Fortune's varieties were the Eastern repre-
sentatives of a new type, for they differentiated
themselves from anything we had in culti-
vation at that time at home, as some were
spotted and striped, others were of fantastic
forms, and obtained the name of "Dragons."
The originals of the present day spidery types
were among them; others were lacinated;
and as the veteran John Salter wrote, "they
had the character of Japanese Pinks rather
than Chrysanthemums." At the time of the
introduction of the Japanese form raisers of
Chrysanthemums in this country favoured
the formal incurved type; and the proba-
bilities are that among the many seedlings
raisers rejected as not conforming to the
incurved or reflexed forms, there were some
probably near to the original Japanese type,
for the Chrysanthemum has always been
found to be variable in the matter of seed-
lings.

When the first Japanese varieties were
introduced the growers for exhibition at that
time frowned upon them and refused to admit
them to their collections. But some had
keener vision, and saw in these singular and

READERS are requested to send Notices of Gardening
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London, E.C., and to no other person and to no other
Address.

uncouth Japanese forms great possibilities of development, and they proved to be right. Some seed came over from Japan, and in favourable localities seed was obtained from some of the imported varieties. The seedlings produced from it were found to show both variations in form and colour, but also improvements in fulness and substance. Some of the earliest of these were Hero of Magdala, James Salter, Meteor, Dr. Masters, Regalia, and The Mikado, and most of those named were grown for some years.

If it were possible to institute a comparison between the three first-named of these, which were regarded as great acquisitions thirty years ago, and such leading present-day varieties as Madame Carnot, Mons. Chenon de Léch , Golden Gate, Mrs. H. Weeks, Australie, Western King, and others, it could at once be seen how enormously the Japanese varieties have increased in size, colour, breadth, and depth, until blooms measure 9 and 10 inches in diameter, if not more. The size of flowers and their fulness and brilliancy is materially furthered by good cultivation. Cultivators who vie with each other in the production of highly developed blooms are on the alert to adopt new methods of culture, so that the utmost possibilities of the flower may be brought forth. Exhibition blooms must increase, and are increasing, in size, and we can only imagine the dimensions to which they may have attained ten years hence.

The introduction of the Japanese form, and the popular appreciation of it, not only gave a powerful impetus to the cultivation of the Chrysanthemum, but also operated to revive the interest in the other sections which had at the time commenced seriously to decline. It was complained that the incurved varieties were very small in size, while not a few of them were of weakly constitution. This led to the cross fertilisation of some of the incurved varieties and the more formally incurved Japanese forms. This mixed parentage, while it produced large true incurved varieties of vigorous growth, also gave birth to a mixed progeny, and among them reflexed Anemone-flowered and single varieties. Thus all sections benefited by the action of the florist, and the votaries of each found something added calculated to revive their flagging interest in the flower.

All the early introduced Japanese were tall in growth and late in blooming. It was said of them at the time that they bloom later than the English-raised varieties in cultivation and remain longer in bloom, so that the greenhouse continues to be bright with blossoms all through the dull winter months when flowers are scarce; so that the greenhouse can be made gay with them well into the middle and end of February. Indeed, the flowering season of the Chrysanthemum may be said to commence in July with some of the early pompons and following on with the October varieties, then the great rush of the November bloom, finishing up with the very late varieties, thus covering some eight months of the year. "There are few persons among the lovers of flowers," wrote John Salter, half a century ago, "who have not admired the Chrysanthemum, and when Geraniums, Verbenas, and other beauties of the parterre are withered, and the 'last Rose of Summer' faded and gone, then it shines forth in all its glory and takes its place, par excellence, as chief among autumn and early winter flowers."—R. DEAN, V.M.H.

Veronicas.

Veronicas appear in so many diverse forms of foliage that a collection of them presents many interesting features. Especially so are the shrubby New Zealand kinds, which are so useful where hardy shrubs in green and golden tints are required for winter outdoor use. Among the prostrate creeping species are several used for covering rockwork, while others are but wee weeds, both in leaf and flower. Veronicas are mentioned, that the claims of *V. longifolia* with blue flowers, and its variety *alba*, as good hardy perennials, may be pointed out. The flower spikes are upwards of a foot in length, and the plants continue in bloom from July into autumn, at a time when mixed borders need all possible flowers, big and small, to keep them bright. *Veronica longifolia* is sweetly scented, having a perfume characteristic of several species of this genus.—DAVID S. FISH.

Forcing Bulbs.

Chrysanthemums under glass at present make a brave show, being in the full flush of their brilliant beauty, and onward till Christmas successional batches of plants will supply the bulk of flowers needed for use in a cut state. We want, however, some variety in our flowering plants at all seasons, and when November comes round, the flowers of early forced bulbs have a charm and freshness of their own, which is all the more appreciated because they are comparatively scarce. The Paper White Narcissus *grandiflora*, and the double Roman, if potted up in August, may with gentle forcing easily be brought into flower by the middle of November. The chief point to observe is to get plenty of active roots and at least a couple of inches of top growth before they are removed from their plunging material. Roman Hyacinths may also be easily flowered in November if potted up early, even when ordinary bulbs are used, and by obtaining retarded bulbs there need be no lack of pure white Roman Hyacinths in any garden during the autumn months. Thanks also to the practice of retarding roots, grand potfuls of *Spir as* may be had in full flower during October and November. In these matters we are much more favourably placed than gardeners of a generation ago, whose skill was put to a severe test to produce a sufficient quantity of forced flowers thus early in the autumn.

We have, however, even now one period of the year when flowers are usually scarce, unless special efforts are made to bridge over that time—I refer to Christmas and the first two or three weeks of January. Owing to the many social events, which take place during those few weeks, the demand for flowers is great, and from the present time onward gardeners should bear that fact constantly in mind, and make their preparation accordingly. If a commencement is made too late, the hard forcing attempted to make up for lost time often brings disaster. Tulips and Daffodils—any bulbous plants—are perhaps more popular than anything at the festive season. And as the former may be flowered by the first week in December I have always found it an excellent plan to place a few Tulips in heat during the second week in November, and a batch each succeeding week. The advantages of the practice are that not only does it give the opportunity of providing a few very early Tulips, but—what is more important still—it gives the forcer the opportunity of finding out the exact conditions under which this early forcing can be successfully carried out. It is the easiest thing in the world to succeed at the first attempt one year, and to fail the next, through having forgotten or failed to notice a necessary condition. And in large establishments, where changes are sometimes necessarily made in the staff, it is not an easy matter for the newcomer to find out the peculiarities of various forcing houses, but a few trial batches point the way to treating large ones successfully.

By the beginning of December Tulips intended for flower at Christmas ought to be placed in heat. The bulbs should, of course, have been potted early, and by that time there will then be plenty of roots, and the top growth will also have started. If the pots or boxes containing the bulbs are then stood in a handlight or close frame on cocoanut fibre, where there is a bottom heat of from 75 degrees to 80 degrees, and the temperature of the house ranges from 60 degrees to 65 degrees, there is not usually much difficulty in getting them to flower satisfactorily, always, of course, provided they are kept dark for a time. Early forced Tulips, however, often come too short in the stem. The best means I know of lengthening them is to cover them with a few inches of moss to draw them up. As soon as the colour of the flower is visible light and air must be given to ensure substance, and although it is sometimes wise to remove the light from the frames, it is a risky proceeding to remove the plants from the bottom heat till the flowers, or, rather, buds, have swelled to their full size, as so slight a check at mid-winter will sometimes cause the roots to turn brown and die. Later in the season elevating the pots on a shelf, or a stage close to the glass is beneficial, as both leaves and flowers gain in substance by the practice. The scarlet and rose varieties of the Duc Van Thol Tulips are the best for providing flowers at Christmas.—PLANTSMAN.

(To be continued.)

**Angræcum Sanderianum.**

From the accompanying illustration those cultivators of Orchids who do not possess *Angræcum Sanderianum* can obtain a very fair impression of its beauty and general character. The

is a safeguard to clean plants and checks the attacks of insects before they have time to injure them.

The baskets in which Galeandras are grown should be kept up as close to the glass as possible. If the tops of the plants are an inch or two clear of the glass they will come to no harm, and the increased light they obtain will be all in their favour. Growers in the vicinity of large towns have found of late that their plants are not much better off close to the glass than away from it as far as the light is concerned, the sooty deposit left by the fog effectually excluding this aid to culture. The only thing to do is to mop the glass down outside as frequently as possible, and sponge the inside, for the best glazing system ever invented will not keep out a London or Manchester fog.

Galeandras are not the only Orchids that are benefited by



ANGRÆCUM SANDERIANUM.

species is grown in baskets suspended from the roof of a house with a temperature of 55deg to 60deg, where it generally thrives. It is free flowering, the long racemes being coloured creamy-white. It was originally brought from the Comoro Islands, which lie north of the Mozambique Channel, and summer is the season when the long drooping scapes open. The stems are 6in to 15in long.

The Week's Cultural Notes.

Not many species of Galeandra are now grown in collections, *G. Devoniana* being, perhaps, as frequently seen as any. This is now coming into flower, and until after the blossoms are past the water supply must not be reduced. But when they are over the work of the plant is, as it were, finished for the year, and only sufficient moisture is needed to keep the roots alive and the pseudo-bulbs from shrivelling. Less heat is also necessary, the species being very subject to the attacks of thrips and red spider if kept dry and hot. Occasional dipping in weak tobacco water

light now; that fine *Dendrobium Dearei*, just out of flower, needs plenty of it. Its growth is finished for the season, and the flowers are past; but, nevertheless, the plant must have light. *Odontoglossums*, again, are pining for the light that we could not give them in summer, simply because during our long days the sun has too much power; while in their native haunts high up on the Andes, where the day and night are more nearly equal, they are subjected to very similar conditions all the year round.

Just now, in short, the grower of Orchids must take more care of individual species than at any other season. Some sorts are finished; some plants of the same species are at rest while others are still growing; one might almost say that each individual plant wants watching. And the grower who at a critical time studies the individual needs of his plants most closely, and anticipates the wants, will come nearest to perfection in the difficult task of providing a suitable home within four walls for plants found growing naturally many hundreds of miles apart under greatly varying conditions.—H. R. R.

NOTES & NOTICES

The Richard Dean Testimonial.

We call attention to the list of subscribers to this deserved testimonial, whose names appear this week in our advertisement columns. The total amount promised up to the 13th inst. was £204 13s.

National Dahlia Society.

A meeting of this society will be held, by kind permission of the Horticultural Club, in the Club room of the Hotel Windsor, Victoria Street, S.W., on Tuesday, November 26, at 3 p.m. Agenda, schedule.—C. E. WILKINS.

Irish Gardeners' Society.

The above society will hold their next lecture on the 20th inst., in their usual quarters, XL Café, Grafton Street, Dublin. The lecture will deal with the "Pollination of Flowers," by Professor Pethybridge, of the Royal College of Science. ERRATA.—In a recent report of the Irish Gardeners' Society you had a slight misprint. The name Mr. Swalpole should be Mr. Walpole, of Mt. Usher, County Wicklow.—A. O'N.

Waterloo Horticultural Show.

The first annual show in connection with the newly formed Blundellsands and Waterloo Horticultural Society was held on November 6 at the Town Hall, Waterloo. In every respect the show proved an excellent one, the display of Chrysanthemums being particularly fine. The exhibition of fruit was also very good. Mr. Marshall Hall, K.C., M.P., opened the exhibition, and delivered an appropriate speech. The best collections of blooms staged were those of Messrs. C. McLaren, T. Alsop, F. W. Cornelius, and D. T. Fairclough.

Bog Slide in Ireland.

Following very heavy rainfall of a week ago, a serious bog slip occurred near Liscannor, on the west coast of Clare, within a quarter of a mile of the scene of last year's slide, in which two lives were lost. The slip began on the Carhudiff Hills, and a great mass of semi-fluid bog flowed for four miles through the country until it discharged itself into Derry River, and thence into Liscannor Bay. In parts the sliding soil was fully 300yds in width, and blocked the public road in two places in its course. The moving mass swept away hayricks and peat stacks, and a number of cows and pigs were lost. A farming family named Killoughry were compelled to escape by the upper windows, which was done with difficulty. Several persons are practically ruined by their land and crops being covered in places to a depth of 15ft, and many pitiful scenes have been witnessed. The slide has caused immense excitement in West Clare, and it is feared that a further movement of the bog, which is extensive, may occur.

Richmond Horticultural Society.

We are requested by the secretary of the above society to state that the first annual dinner (in support of the society's funds) will be held on Thursday, November 28, at 7 p.m., under the presidency of Leopold de Rothschild, Esq., at the Star and Garter Hotel, Richmond Hill. The society is at present, unfortunately, in debt. It has become necessary upon this occasion to open a dinner fund, to which subscriptions are earnestly invited, and may be made in any desired amount. A sum of about £300 is required on or before November 28, 1901, for the society to close its financial year out of debt, and enable it to prepare to enter upon its operations in 1902. The committee beg most strongly to recommend this matter to the careful consideration of the society's subscribers and exhibitors, and to ask them to bring it to the notice of their numerous friends who have from year to year received recognition of their efforts at the shows, or derived pleasure from attending to view and enjoy the exquisite productions that are shown. All inquiries and applications for dinner tickets should be addressed direct to the honorary secretary and treasurer, Mr. C. R. King, 61 and 62, George Street, Richmond, Surrey. The price of the tickets is 7s. 6d. each for lady or gentleman, exclusive of wine, but the fund receives no pecuniary benefit at all out of this charge.

New Gloria Dahlias.

From Mr. J. C. Schmidt, Erfurt, Germany, comes a coloured plate of what he terms Gloria Dahlias. They are exactly the same as some that Hobbies, Limited (Mr. John Green), showed at London exhibitions in the summer time, in which the disc of central florets have become enlarged, variously coloured, and more urceolato in form.

Gardeners' Royal Benevolent Institution.

We are glad to learn that the concert promoted by Mr. A. J. Brown, of the School of Handicrafts, Chertsey, in aid of the funds of the above institution was successful. Mr. G. J. Ingram, the secretary, expressed the thanks of the committee to the public of Chertsey in supporting the concert this year and in previous years. He gave instances of local gardeners who were in receipt of pensions from the institution.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, November 26, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. Instead of Professor Henslow's demonstration, a lecture will be given by Mr. J. E. Austin, on "Fruit Preserving in Relation to Fruit Culture." Mr. Austin will also exhibit a large number of specimens of bottled and otherwise preserved British fruits. At a general meeting of the Royal Horticultural Society, held on Tuesday, November 12, twenty-two new Fellows were elected, amongst them being Lady Clay, Sir Alfred S. Lettbridge, K.C.S.I., Major MacRae-Gilstrap, E. Evans-Lombo, J.P., D.L., G. H. Pinckard, M.F.H., making a total of 851 elected since the beginning of the present year. The vacant Victoria Medal of Honour has been conferred by the council of the society upon Mr. W. Bateson, M.A., F.R.S., of the University of Cambridge, for his study and investigations in Hybridity and Heredity.

Dundee Horticultural Association.

At the monthly meeting of this association, held on Tuesday, November 5, Mr. McDowall, Brechin Castle, read an instructive paper on "Apples as Grown at Brechin Castle." There was a large attendance of members. Prefacing his remarks by stating that he had nothing really different from good practice in other gardens, Mr. McDowall went on to detail the advantages of judicious pruning. This, he pointed out, would in most cases ensure fertility, and the marvel was that such a simple expedient was not more commonly employed to render unprolific orchards remunerative. Of several hundreds of really fine sorts only a limited number can be expected to succeed under all conditions. Each aspect and situation, so to speak, has its own particular favourites, and the first consideration of planters ought to be to discover those kinds which thrive well in their own district. Mr. McDowall detailed a number of types that did well at Brechin, and concluded by remarking that selection, not collection, ought to be the aim of growers for profit.

Presentation to F. W. Moore, Esq., M.R.I.A.

The council of the Royal Horticultural Society of Ireland at their monthly meeting, held on last Friday, took the opportunity of presenting F. W. Moore, Esq., M.R.I.A., with a very handsome canteen case of forks and knives on the occasion of his approaching marriage. In the absence of the president, the Right Hon. Lord Ardilaun, who wrote expressing his regret at not being able to attend to make the presentation, but asking Mr. Moore to accept his good wishes, Mr. Robertson presided, and in making the presentation referred to the kindly feeling that at all times existed between Mr. Moore and the other members of the council, and to the benefits the society had derived from Mr. Moore in the past, expressing the pleasure it gave his colleagues on the council to have such a fitting opportunity of, in some tangible form, conveying to Mr. Moore their sincere appreciation of his indomitable zeal and unflagging energy in from time to time helping to further the object of the society, and on behalf of the council wished Mr. Moore and his bride elect every happiness in their future state. Other members of the council spoke to the same purpose, to which Mr. Moore suitably replied, expressing the pleasure it gave him to be the recipient of such a handsome and useful present, and for which he most sincerely thanked the council, remarking that the courtesy and kindness he had at all times received from the members of the council rendered anything he had done for the society only a pleasure, and that he had every hope for the society's success in the future.

Royal Appointment.

Messrs. Dickson and Robinson, of Manchester, have been honoured with the Royal warrant appointing them seedsmen to His Majesty the King. They for many years held similar appointments to Her Majesty the late Queen Victoria and H.R.H. the Prince of Wales.

The Late Mr. A. H. Smee.

On the 8th inst., at his residence, The Grange, Hackbridge, near Carshalton, in Surrey, this highly respected, accomplished, and useful gentleman died. He was enthusiastic as a gardener and in natural science. Orchids were his special favourites, and for long he has been identified with the Orchid Committee of the Royal Horticultural Society.

Weather in London.

The weather of the past week has varied considerably. Some days, as on Saturday, the fog was black and very dense, while, again, sunshine was liberal on Sunday. "White" frosts have been with us on three or four mornings, the thermometer recording so much as 14 degrees of frost at Kew on the 16th.

Weather in S. Perthshire.

Sharp touches of frost had been of pretty frequent occurrence before the end of last week, but it was then that winter appeared to have fairly set in. Heavy snowfalls took place in both the northern and the southern counties. On the morning of the 15th and 16th 9 degrees and 15 degrees of frost were recorded. On the evening of Saturday a thaw set in. Monday was windy and wet almost throughout.—B. D., S. Perthshire.

Chrysanthemums at Southport.

On November 6, the Southport and Birkdale Horticultural Society held its annual show in the Cambridge Hall and one of the rooms of the adjoining Art Gallery. The number of entries showed an increase as compared with previous years, and the quality was far above the average. The Challenge Cup was again won by Councillor W. Shuttleworth with a magnificent group of Chrysanthemums, and the trophy now becomes his absolute property. In the amateur section some fine collections were noticeable, and here Mr. J. J. Barlow's cup was won by Mr. J. J. Welchman. The chief prizewinners included the following: Messrs. T. Johnson, O. Hill, L. Heath, A. Francis, J. E. Swift, and B. Wall.

Horticultural Club.

It was an interesting occasion when the members of this valuable club were summoned on Tuesday evening, the 12th inst., when the portrait of the Rev. H. H. D'Ombraïn was unveiled. The portrait was painted by Miss May Rivers, and was admirably executed, the likeness being a thoroughly good one. The chairman of the club, Sir John T. D. Llewelyn, Bart., had promised to attend, but was unfortunately prevented by urgent business from being there. The evening was an open one—that is, ladies were invited—and there was a large gathering of members and their friends. Mr. Harry J. Veitch, vice-chairman of the club, who occupied the chair, in his usual happy way mentioned the circumstances of their meeting together, and then called on Mrs. Veitch and Mrs. Watkins to unveil the picture, which was done amidst much cheering, and was then carried to its place in the club room. The club's wish to have their secretary's portrait painted when he is in his eighty-fourth year must, we presume, be taken as a proof of how much his services have been appreciated.

Carnations from Battle Abbey.

Mr. Wm. Camm, from "The Gardens," Battle Abbey, Battle, sends us a most delightful box of odorous Carnations, with the following letter:—"I send you a few blooms of Carnation seedlings which were sown eight months ago. The variety is Riviera Market, much better than Marguerite varieties and just as free blooming. They are now in 10in pots, and produce about one dozen blooms each plant a week, and they will continue to bloom all winter. I send you also grass from them. Should you consider them worthy of a note as to culture I will send you one on with pleasure." We are sure that notes from Mr. Camm would be of the greatest service. We are perfectly delighted with the robust growths, the large and splendidly coloured flowers, and feel sure that if many friends could likewise see them they would at once desire to cultivate a goodly batch.

Appointment.

Mr. W. S. Cholwell, for two years foreman at Mount Edgecumbe, Cornwall, previously head gardener at the Manor House, Stoke, Devonport, has been appointed head gardener to James J. MacAndrew, Esq., of Lukesland, Ivy Bridge, South Devon.

National Chrysanthemum Society.

The annual dinner will take place on Wednesday next, November 27, in the Holborn Restaurant, Sir Albert Kaye Rollit, LL.D., D.C.L., M.P., &c., in the chair. It is earnestly hoped that supporters of the society will attend this dinner.

Birmingham Gardeners' Association.

Following immediately upon the recent Birmingham Chrysanthemum Show, Mr. W. Spiells, in conformity with his annual custom for so many years past, opened a discussion on the leading features of the Chrysanthemum Show. Many pertinent remarks were also made by Messrs. C. H. Herbert (the chairman), A. Cryer, W. Gardiner, C. R. Bick, J. Wheeler, and others, with also suggestions in the way of future innovations and arrangements.

Death of Mr. William Balchin, sen.

This well-known South of England nurseryman, the head of the firm of Messrs. W. Balchin and Sons, of Brighton, died at his residence, on the Hassocks Nurseries, on the 16th inst., in his seventy-seventh year, and after a painful illness which had kept him bedridden for about twelve months. Mr. Balchin came to Brighton when a young man, and foreseeing the development of the town, he commenced business as a florist in conjunction with his brother-in-law, the firm being Messrs. Balchin and Neel. In course of time this partnership was severed, and the business was carried on alone by Mr. Balchin until his sons were taken into partnership, and the business became known as W. Balchin & Sons. Of late years the business has undergone great extension. There are nurseries at Brighton, Hove, and Hassocks, and there are the Sillwood Conservatories in the Western Road and the St. Albans Conservatories in the Church Road, Hove. At Hassocks there is a considerable range of glass, and a considerable quantity of plants are grown there for the supply of the Brighton and Hove conservatories, as well as shrubs and forest trees, and fruit trees in considerable abundance. Under the management of Mr. William Richardson the Hassock Nurseries have become famous for hardwooded plants, Leschenaultias, Boronias, Ericas, Epacris, and many others, being extensively propagated for supplying the trade. Thoroughly immersed in his business, Mr. Balchin turned a deaf ear to take part in the public life of his adopted town. He was a man of high moral character, and probably had as few enemies as any resident in Brighton. Mr. Balchin married twice, and leaves a widow and eight children—five sons and three daughters. He was buried in the Hove Cemetery on Wednesday, the 20th inst.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901. November.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ...10	W.S.W.	deg. 47.7	deg. 44.4	deg. 52.1	deg. 44.8	Ins. —	deg. 45.8	deg. 47.5	deg. 50.5	deg. 41.5
Monday ...11	W.S.W.	51.4	46.4	54.4	45.4	—	46.2	47.9	50.5	38.9
Tuesday ...12	S.S.W.	50.9	47.6	53.3	48.9	0.06	47.3	48.3	50.5	44.2
Wed'sday 13	S.W.	46.9	43.7	48.3	45.7	0.27	47.1	48.5	50.5	39.8
Thursday 14	N.N.W.	36.9	33.9	41.6	36.5	—	45.4	48.5	50.5	33.5
Friday ...15	W.S.W.	29.0	28.2	40.4	25.5	—	41.7	47.7	50.5	12.8
Saturday 16	E.S.E.	24.5	23.8	32.6	21.1	—	39.2	46.3	50.2	11.5
MEANS ...		41.0	38.3	46.1	38.3	Total 0.33	44.7	47.8	50.5	31.7

The weather during the first part of the week was dull and mild. On the 12th a heavy gale of wind occurred, followed on the following day by rain, since which there has been frost and much fog, the latter doing little damage to Vine leaves in the big vinery.



Potatoes.

I have been recommended to start at once digging up my land ready for the next Potato crop. I was told to put manure in just as we do in the spring, but to stick a twig at the ends of rows of manure, and then in the spring put a line down and make a small drill or trench and lay seed Potatoes in, covering them with earth by means of a hoe; this would partly mould them up. Could any of my fellow readers give their experience of this method of autumn cultivation for Potatoes?—J. T. THURSTON.

Blinds for Glass Houses.

This is hardly the season to discuss methods of shading glass houses, but in the reply to "Ignoramus" on "Blinds for Glass House," page 432, November 7, it is stated that Parisian blinds are too clumsy and not serviceable for greenhouse roofs, but will do for the upright parts. In my opinion the Parisian blinds are quite equal, if not better, than the old-fashioned wooden roller and canvas blinds. The Parisian blinds are made of wooden laths $\frac{3}{4}$ in broad, connected together with flat zinc chains. They are readily drawn up and down by cord and pulley. They are made in convenient widths, which enables them to be worked much better than the long wooden rollers, which cannot easily be manipulated, especially on long houses.

A great fault in fixing the wooden roller blinds is in allowing the roller, with its own heavy weight, as well as that of the blind, to rest upon the ventilators, which in some houses open at full length along the top. The Parisian blinds may be placed on the roof of a span or lean-to below the ventilator, and, being fixed in convenient widths, with a cord and pulley attached to each, the working is simple and easily done. The arrangement of blinds to work quickly and conveniently, and act efficiently, requires a considerable amount of care and attention, and frequently means much expense. Though not having actually used the Parisian blinds, I have seen how they work, and am favourably impressed by their neat, pleasing appearance, and the diffused shade they give.

The great advantage of movable blinds is that they need not be used in dull weather, while permanent shading must remain. Some good gardeners, however, like the latter, even with its disadvantages, and I have known Orchid growers have very diverse opinions as to the use of movable blinds and permanent shading. In spring, doubtless, this subject would excite more interest than it is likely to do now.—LIGHT AND SHADE.

The Name, Ha! Ha!

To designate sunk fences, which are found on all country estates, by the combination of two pert exclamations that are liable to convey the feelings of varied moods, particularly satire, or, on the other hand, joviality, seems to require some investigation. I am impelled to pen this note after reading your storyette in the correspondence column, page 432, of November 7. The tale of the ladies flying from the neighbourhood of the cattle, and finding later on that the oxen could not have reached them because of a sunk fence, is humorous, and might well have been the factor which called up the ironical title conveyed in Ha! Ha! I have heard another story—that of a horseman in full gallop across country, who came suddenly to the margin of a sunk fence, and whose wary nag reared on its haunches, which performance brought forth from its rider a "Ha! Ha!" of mighty surprise, in a tone that conveyed to poor horsie that, though rearing on hind legs was a good and proper thing when such a sudden change from an onward gallop had to be undertaken, yet the breach must be crossed when the facts of the course were discovered. Both explanations of the name are fairly reasonable, and either of them may be correct. There is, however, another derivation that may receive consideration.

Referring to Webster's "International Dictionary," I find Ha-Ha given, and referred to Haw-haw, which is said to be a duplication of haw, a hedge. The Hague, capital of the Netherlands, signifies "The Hedge," and may we not assume that the Dutch word hage (English, hedge; German, hag) was directly applied to a sunk fence as being a hedge, or limit, and this name, through time's corrupting influence, been transformed to the Ha-ha, or Ha! Ha! as now employed? In Scotland haugh (pronounced with the guttural) is the name given to a level piece of grass land lying between two ridges or the banks of a glen. But, after all, under any or all names or designations, a sunk fence in practical English is still that and nothing else.—D.

Hybridising the Rubus Tribe.

An old, yet enthusiastic gardener and reader of the *Journal*, writes as follows:—"With your permission, allow me to tell Mr. Burbidge that 'the happy marriage' between a garden Raspberry and *Rubus phoenicolasius*, has taken place, bearing fruits this last season for the first time, and very fine fruits they were. Four crosses were made with varieties of Blackberries and Wineberries, but the plants were too small to fruit. They are, however, making splendid canes." Samples of each accompanied the above letter, and we can vouch for the vigour of them as judged by the pieces sent.

Maggots in Grapes.

I am sorry to say the maggots in Grapes, an instance of which is dealt with in the "*Journal*" of October 24, have been observed here, and this also for the first time. The examples coincide entirely with those so exhaustively described by Mr. Abbey. I had previously noted the rubbed appearance of some of the bunches, and also the maggots; but, without close examination, had blamed wasps and mice, both of which were in evidence, for the trouble. A new man, going over them with the scissors, soon informed me that the small particles on the berries, which I had casually supposed to be nibblings of Grape skins, were, in Yorkshire phraseology, "wick." In our case there is no inside border, simply ashes for a few plants to stand upon; the outside border had been mulched with stable manure in spring, but was apparently little more than straw when the attack was noticed. Bones have not been used for some years.—J. C. A., E. Yorks.

Mutual Improvement Societies.

"H. K." touches on an interesting subject in the *Journal* for November 7, page 422, when he enlarges upon the great advantages accruing to gardeners who belong to mutual improvement societies. I, for one, can fully endorse what he says, as I think they are great aids to a gardener in the pursuit of his calling, and are as indispensable as an horticultural paper. Many young men, and older men too, go considerable distances to attend the meetings. Not only are interesting papers read at the meetings, but much information is gained by the discussions which invariably ensue upon the papers, which bring out points of much value to a large number of the members. Good tempered and fair criticism is invited by readers of papers, who oftentimes are not the least to benefit by the opinions expressed. The meetings not only afford means of the interchange of views on cultural methods, but afford facilities for eliciting information on doubtful points, the interchange of cuttings, seed and seedlings, and the naming of plants. Some of the most successful societies I have known possess a circulating library, containing a large number of the best standard works on horticulture. This is a boon to many garden workers, and should be taken advantage of by the younger members, who cannot study the best literature too much.

The gardening charities and benefit societies ought to advertise themselves in every mutual improvement society meeting room, either by prominent posters, or by circulating pamphlets detailing their objects, so that all the members may become familiarised with the movements afoot for their benefit. Every incentive should be offered to the younger members to read papers, however short they may be, or to ask questions on any subject pertaining to gardening. Replies will be forthcoming by the more experienced men present, or if the subject needs research, this may be undertaken by some of the officials, and a reply given at the next meeting. Some very interesting points might in this way be cleared up, and ideas started which might provoke considerable discussion. More will probably be said by qualified men on the advantages of these societies, which are filling a long felt want in some of the populous districts round London and other large towns and cities throughout the country.—E.

Garrya elliptica femina.

It is seldom that the female *Garrya* bears fruit. A fruiting spray is reproduced on page 463. Nearly everyone knows the elegant form of the male plant, *Garrya elliptica*, whose beautiful pale, greenish-white or yellowish drooping catkins appear even so early as December in mild winters. They are always to be seen by mid-January. The dark, smooth foliage is also particularly pleasing. The berries of the female plant are black in colour; to obtain fruiting specimens it is necessary, of course, to possess plants of both the sexes. *Garrya elliptica* is a Californian shrub, and consequently requires a dry, or, at least, well-drained, friable soil in this country, and in most cases it derives benefit from the protection of a wall. Tassel-bush is a popular name bestowed on it. Cuttings or seeds are the means for propagating it.

Unsatisfactory Fruit Trees.

How to Improve Them.

I have long held the opinion that lack of moisture at the roots of fruit trees has in innumerable instances been the chief cause of non-success in regard to the production of regular crops, and as the years roll on new facts come to my notice which strengthen that opinion. As a rule fruit-growers seem to consider that it is only trees grown against walls or buildings that are likely to suffer in this respect; but bushes and standards grown in the open suffer almost as much, even when the soil is of good depth, and, in all respects, suitable for fruit growing. Under ordinary conditions it is, of course, not practicable to water trees in extensive plantations; but much can be done to prevent dryness at the root by mulching with manure, or by hoeing frequently during the summer months.

In the case of some unsatisfactory trees, it is, however, necessary to adopt other methods to improve them. During the present year I have been considerably puzzled at the behaviour of several very fine bush Apple and Pear trees, which, judging by their appearance, are in splendid condition for bearing good crops. The branches are thinly disposed, the wood firm and well ripened, and last spring they blossomed abundantly at a time when no frosts occurred to injure them. Yet the blossoms failed to set, and the crop has been almost nil. These trees have recently been examined at the roots, and, as I expected, the soil a few inches below the surface was found to be—to use a common expression—as dry as dust. It is not a case in which root-pruning is needed, as the soil is permeated with a network of fibres, and I am convinced that the sole cause of failure is dryness at the roots, which prevented the blossoms from setting.

The rainfall in most districts during the last few years has been below the average, and I fancy this to a great extent accounts for the irregularity of the Apple crop. In moist districts and situations the crops have been heavy, in dry ones very light. In the case of the trees already described, the surface soil has been removed for a distance of 3 feet from the main stem, the dry soil beneath—which was as hard as the proverbial brick—has been loosened with a fork, and a thorough soaking of water was given before the holes were filled in. I shall be much surprised if this treatment does not lead to better results next season, if the weather at blossoming time is as favourable as it was last year.

In gardens and fruit plantations there are, at this season of the year, many matters which need attention in order to improve some trees and maintain others in a satisfactory condition. Owing to the wide influence of the horticultural Press, sensible methods of pruning are more largely practised than formerly, and attention is paid to root-pruning where the trees have grown too strongly, but methods of remedying dryness at the roots need more attention. In large plantations watering cannot, of course, be practised, but the surface soil can be removed as far as the

branches extend, that beneath it loosened with a fork, and then, if it is left exposed to the weather for a couple of weeks, the rains may thoroughly moisten it. In some instances it is also wise to replace the surface soil with fresh soil taken from between the rows where it is usually moister. Trees which have made but little growth, or have borne heavy crops, are greatly benefited by the application of a coating of well-decayed manure, this to be just covered with a little soil from between the rows. On heavy soils, a dressing of basic slag, at the rate of 6oz per square yard, if given after the leaves have fallen, and the soil is forked up, helps to ensure high colour in the fruits the following season. On lighter soils superphosphate and kainit, each applied early in spring, at the rate of 4oz per yard, help to give improved results.

Large trees with a wide spread of branches are sometimes unsatisfactory, because their main roots have been sent deep down into the soil, and very few active roots are to be found near the surface. One of the best methods I know of for improving such trees is to remove a few inches of soil, dress with basic slag, give a coating of manure, and cover with fresh soil from between the rows, using the old surface soil to fill in the holes thus made. The present is also an excellent time to empty the contents of cess-pools around old orchard trees as far as the branches extend, always taking the precaution to dilute it with from two to six times its bulk of clear water. I have so often proved the advantage of such a practice, that I often wonder why owners or tenants of orchards do not follow up the plan systematically. Many varieties which grow weakly, or canker badly, may be brought into splendid condition solely by the use of liquid manure. On fairly good soils resting on rocks of a "scaly" nature, Ribston Pippin and Cox's Orange Pippin Apples succeed wonderfully well if given liquid manure. When without it they canker badly, and are altogether unsatisfactory.—WARWICK.



GARRY. *F. ELLIPTICA FEMINA.*

Figs under Glass.

EARLIEST FORCED TREES IN POTS.—To have fruit ripe at the end of April, or early in

May, when it is very acceptable for dessert, the trees should be started in December, and they must be of the early varieties that usually retain the first crop Figs. After trying most varieties, I find Early Violet and St. John's, with Brown Turkey to succeed them, unequalled from all points of view. Dress the trees with an insecticide, adhering closely to the instructions, and being careful not to injure the points of the shoots and their incipient Fig-buds. Place the pots in loose brickwork pillars, so that they may not settle with the fermenting material, which, being placed in the pit and brought up about the pots, will afford a genial warmth and moisture; but the heat about the pots must not exceed 65 degrees until the trees are fairly in growth. The top heat may be 50 degrees to 55 degrees at night and 65 degrees by day, the trees and house being damped in the morning of fine days and again in the afternoon, but it must be done sufficiently early to allow of the trees getting fairly dry before night.

Water must be given at the roots to render the soil evenly moist, supplying it at the same temperature as that of the heat about the pots; but avoid over-watering or a wet condition of the soil, as that neither favours root formation nor a sturdy development of growth. Also avoid a close moist atmosphere, the moisture arising from the fermenting material, with an occasional damping of the paths and walls, will be sufficient in dull weather.

EARLY FORCED PLANTED-OUT TREES.—The earliest house should be closed in December to have ripe Figs in May. Brown Turkey is the most reliable variety, and for a white one White Marseilles; but this requires restriction at the roots and a rather extensive run of trellis. Where, however, the earliest Figs are obtained from trees in pots, starting the trees in borders may be deferred until the new year, so as to afford a succession. Planted-out trees, even with the roots confined (as they should be for early forcing) to narrow inside borders, will not ripen the fruit so early as trees in pots with the aid of bottom heat; hence, if started at the same time, they will afford a close succession to that from trees in pots.

The trees having been pruned and dressed with an insecticide, the house thoroughly cleaned, and the border top-dressed, attention must be given to the moisture of the border. Assuming the soil has become dry, apply water in a tepid state to the roots at frequent intervals, until the soil is thoroughly moistened, but not made sodden by over-supplies. In the matter of temperature proceed as for the house with trees in pots.

In succession houses prune the trees when the leaves have fallen. Lightly point the border, remove the loose material, supply fresh loam with a sprinkling of bonemeal, and scatter a few sweetened horse droppings on the surface. Ventilate freely in mild weather, only closing when frost prevails.—GROWER.

Mostly Irish.

Rain—"teeming rain," as they say here—has "teemed" all day, and the look-out is miserable. One little ray of consolation lies in the probability of its pouring in London, and is, possibly, more miserable still. There is comfort in comparison—in reflecting that, bad as things are, they might be worse—are worse elsewhere. It has been noted that the dot on the Liffey, and the blur on the Thames, which represents the two cities on the map, are wonderfully in accord about the weather. The dot is small, the blur is big, and the weather in ratio. This is deduced from the daily notes of the London correspondent of the "Irish Times"; cold showers in Dublin, hail in London; leaves tumbling around us, chimney-pots falling in Fleet Street; and so on, and so on. It is a pretty correct rule, too, barring exceptions, which, of course, only prove it. The bigger the exception the bigger the proof. So, as said, it's miserable, but "sufficient for the day"

Yesterday—ah! yesterday—60 degrees in the shade, and glints of gold, pale yellow gold, rich ruddy gold, burnished copper, and red from the dull red of a new pot to the brilliancy of a cardinal's hat, as mellow shafts of sunshine shot through soft misty clouds hurrying up from the west and hit the old Bird Cherry, the big Beeches and Birches, to be finally focussed in the dying beauty of Ampelopsis Veitchii on a south-west wall. But, oh! those Birches favoured of spring, well beloved of the Indian summer. More gorgeous have been the Horse Chestnuts, more tintful the Beeches, but not one of them in all their glory have been arrayed like one of these. It stands, this particular one, on a hillock sheltered from all the winds that blow by deep-toned Pines, and long pendulous racemes, feathering the 40ft of silvery stem, are flecked with gold. Yesterday we saw it transfigured for a brief space by the setting sun, and a thousand whisperings in an unknown tongue answered the gentle west wind as it caressed the tresses of our bonnie birk.

Such things do not last, but the memory of them lingers. The great artist laid on the colours too heavily, too hurriedly, too satisfying, so to-day a great washing-out, leaves half the landscape provokingly bare, and mad swirls of colour lie on the ground. How one could go on and on striking notes of harmony from this gem of the seasons—the Indian summer—which, somehow, seems to receive scant meed of praise! Here is one whose commonround and daily task has been under the very ægis of Nature in all her moods, one

who has witnessed two score, at least, of such eloquent Indian summers. And what has he seen in them? In his own words, "nothing but a terrible mess." Colour-blind we infer, for—

'Tis man's own sickly blindness makes the world deformed alone,
Who knows it most, sees beauty most, who knows it least sees none.

The magic wand has touched the Pear trees on the walls, and that reminds one that they, like these notes, should have something more than sentiment to set forth. The Pears, unfortunately, have all but failed in their practical duties this year, although other gardens around Dublin are more favoured; but Apples are generally scarce. Fine selected Apples have realised fancy prices in the market; 3s. a dozen, according to a Press report, rewarded one grower for a limited sample. Peaches, however, during the season, went very cheap, but Strawberries paid. It has, of course, been a dull season in Dublin city, but when the King comes we shall alter all that. Now and again there was a flutter of excitement when young Ireland in khaki went forth to fight for the old flag, and more excitement when our bronzed yeomanry came back; but they did not all come back, and more than one Irish home mourns "the young master."

Somehow the year has slipped away. One can hardly realise that grumbles about drought were rife when September proved to be the wettest of its name for some years. It—our weather—wanted more mixing. Apropos of drought and fruit trees, old friends (one old, one young) from Straffan—Straffan in Kildare—skipped in unexpectedly some little time ago, and gave a growl (the old 'un growled) anent his fruit trees, which had made no growth this season. Another little ray of consolation in finding that, dry as this district had been, the neighbouring inland counties were worse. Doubtless the Straffan rain guage has another tale to tell ere this. This year should have been a record one for Potatoes. As it is, an opinion one way or the other is scarcely justified, for personal experience is limited, and complaints have been neither loud nor deep. We do know that 10 per cent. of our late Potatoes were bad when dug early in October, but first early varieties were marvellous for quality and quantity. One line of "Dunardagh," an early kidney, dug previously, elicited notes of admiration from the digger. "Thirty to a root; I've counted 'em." The case was not over-stated, one exceptionally strong root being turned up yielding forty-five clean, shapely tubers. The passing year has shown what Potatoes like, for they have fairly revelled in heat, and, one may add, drought, huge tubers having been proverbial.

Writing on the eve of the Royal Horticultural Society of Ireland's winter show, notice may be given of a new feature introduced—viz., competition for Apple-packing in barrels. It is feared that packing in punnets would be more in agreement with the season's shortage. However, anything tending to stimulate the resources of our "distressful" country should be welcomed. The Board of Agriculture and Technical Instruction has also been endeavouring to encourage economic gardening with lectures by an horticultural expert, but it is probably uphill work for, saving those few centres where cottage gardening has been invested with spirit by the powers that rule manorially, it is all but an unknown quantity. Perhaps the fillip of competition by the introduction of local societies would do much. Perhaps not, for it is hard to get off the beaten track—the track of the mongrel hen running through the Potato patch.

It was gratifying to note in "our Journal's" Rose analysis how that old favourite, Ulrich Brunner, is still to the fore. We are not blessed with an ideal Rose soil; some H.P.'s do fairly well, others better, but Ulrich Brunner best of all. It is the only variety of its section which has been exempt from mildew, and mildew this year has been ultra bad. The practically thornless growths, vigorous habit, and dependable qualities of summer and autumn blooming of this fine Rose deserve a note of admiration; but we find close pruning is necessary to bring out its best qualities. Rosa hermosa is a charming decorative subject, and a continuous bloomer. A long border of it is still flowering profusely, and its charming pink blossoms are most useful for cutting; the more appreciated, perhaps, for the "mums" are late, the only fault in this year's culture, if fault it is. Outside flowers are scarce, more owing to continuous wet than to frost, for our coldest night as yet has shown but two degrees of frost, and only on one other occasion has the needle pricked us below freezing point. The only bright thing in

the borders now—and it attracts the most casual observer—is *Salvia horminum*, the purplish blue tracts of this annual being very conspicuous.

But all unconsciously we have gabbled on, and garbled up a strange mixture, it is feared, for, as an old Scotch friend would say, there's sentiment intil't (too much perhaps), and practice intil't (too little, we know), and fruit and flowers and vegetables intil't, so no more with apologies for it, such as it is, and that mostly Irish.—K., Dublin.



Messrs. Cannell's Collection.

Chrysanthemums are one of the most prominently specialised classes of plants in the extensive nurseries of Messrs. H. Cannell and Sons, of Swanley, in Kent. Each year they are the introducers of some sterling novelties, and from what we saw on Saturday, the 2nd inst., their record for the coming season will be quite equal to that of past years. What they have appropriately termed their "thread-petalled" varieties do not figure so prominently as last year's display led one to expect, but we are satisfied that they are still under trial and experiment. The section originated from the Mrs. Filkins' seedlings.

A word of notice is due to the evolution towards a stellate (star) type of single Chrysanthemum, which Messrs. Cannell, so far, seem to have the monopoly of. There have been true star-formed varieties raised already, and some of the best of these bear the names Dorothy, Edith Sybil (the latter a deep bright yellow and very effective), Pemie Roberts (white halo around the yellow disc, and having pale mauve edge), Don (a grand crimson-amaranth), Dora (true star-shaped, very delicate in its parts, and coloured a pale tea tint). The pretty decorative variety named Ladysmith (rose-mauve) is also commendable.

And now to describe the season's novelties in a few words. The first noticed was Henry James, an incurving Japanese seedling got from the Antipodes, and in colour bright golden. The blooms are large and massive. Mark Jill is a handsome variety with drooping petals, brownish above and overlaid with red; it is distinct and good. Louis Fuller is one of Calvat's gifts, and partakes of the colour and habit of the *La Triomphante* of past days; it is, however, a great improvement on the old flower. Frank Hannaford forms a very massive flower of an incurved habit, and coloured golden-bronze, slightly overlaid with russet, a colour difficult to dissect and describe, yet rich and grand.

Mrs. Harry Emmerton furnishes a fine bloom, and one that will almost certainly displace the Yellow Carnot. It possesses a vigorous constitution, and produces handsome blooms of a soft canary yellow, with drooping, slightly revolute petals. It is decidedly one of the gems at Swanley. Madame Marie Liger Ligneau is, we believe, offered as a true incurved variety. In colour and general appearance it is not far removed from that fine Chrysanthemum bearing the title "N.C.S. Jubilee." Then there is *Etoile de Nord*, also from "our sweet enemy, France." It presents a very rich Dandelion yellow colour, has exceedingly broad petals somewhat furcate at the ends, and disposed to form a very massive, though not elegant, flower-head. M. Paolo Raddaelli brings another Continental name forward. The bloom is that of an incurving Jap, and is of unusual depth. The colour is pleasing; very soft, pale creamy-white, and shaded over with lilac-pink. We commend this variety to special notice. General Hutton, too, is being sent out for the first time. Growers may rely on a large flower from this chap, from what we can judge, and the disposal of the petals is of that "swirly" character seen in very few varieties. By "swirly" we mean the whirlpool form, the petals bending rotately sideways. Again we note Mrs. A. C. Milne Redhead, rich crimson above, and deep old gold on the reverse of the incurving petals. There are perhaps too many that approximate to this, or this to them, to allow doing more than say that the variety is attractive and will be serviceable. The Princess has broad petals, somewhat drooping, and is all but pure white. Jumbo is an Australian sort of incurving habit, having a brownish reverse, and is red on the upper surface.

The next to be described is perhaps more beautiful and valuable than any of the foregoing, and its name is Mrs. Rumble. It is dwarfer than is usual with Japs, standing 2½ft to 3ft high. The constitution is vigorous, but the colour of the flower is the great point. This is soft, satiny rose-pink or rose-peach—some might describe it as a silvery apple blossom colour. The petals are narrow, slightly revolute, and droop.

Gadding and Gathering.

"Here awa', There awa'."

Notwithstanding the extensive and careful trial of perennial Asters that was made at Chiswick a few years ago, everyone, or nearly all, at least, agrees that the nomenclature of the genus is radically loose and unreliable—like printers' "pie." One tradegrower—Mr. H. J. Jones, of Ryecroft Nurseries, Lewisham, S.E.—has made a start to grow and compare as large a collection of species and varieties from all obtainable sources as can be secured, and hopes within a reasonable space of time to eliminate a host of the synonymous varieties at present bearing distinct names, and eventually to offer a stock true to name, or, at least, as perfect in this respect as things mundane can be.

Perennial Asters at Lewisham.

By great efforts Mr. Jones got some 270 species and varieties. A great many of these he has caused to be grown in pots to test their adaptability in this respect, and to see what they promise in the way of improvement under intense, or, let us rather say, strict and careful culture in all details. The collections he exhibited at the Drill Hall meetings in September and October, and which were favourably commented on, gave hopes of our having further beautiful and interesting displays in the time to come.

After one season's trial a great deal has been discovered; more will be learnt when Mr. Jones has matured his experience and digested results. We hope he may tabulate every particular and verify any doubts, and by a process of careful building-up give to horticulture and the devotees thereof the facts as he finds them. From what I already have learnt it is pleasurable to report that criticism and keen observation are, and have been, at work. Mr. Jones has done grand work with Chrysanthemums, and the sub-order, the Asteraceæ, only require the skilful attention of a careful and experienced hybridiser in order to produce varieties with the florists' desiderata, which are larger blooms, more brilliant, deeper, and perfectly decided colours, greater variety in the shades of hue, and the general qualities of floriferousness, duration, and usefulness for all decorative purposes.

As pot subjects they commend themselves, and the early varieties of *Aster acris* can be had by mid-July, and other species will continue the display till Christmas, according to the clemency of the weather. The genera included in *Compositæ* almost all defy classification, and the principles put into use in obtaining a reasonable amount of order at Ryecroft will follow the broader and more apparent characteristics evidenced by the "sections" of the genus. Thus the *cordifolius* section will call to mind the varieties with dark, wiry stems, and small flowers numerous borne. *Aster Amellus* is characterised by the large size of the flowers and dwarfness of the plants; the *Novæ-Angliæ* sorts have hairy stems and leaves, and in height range between 4ft and 6ft, and so on. And now to furnish a brief selection, which I guarantee includes only the finest varieties. Taking the *cordifolius* group first, it includes *Photograph*, with a profusion of white flowers, and *Diana*, with myriads of lavender blossoms. *A.c. elegans* and *A.c. major* may also be selected. Of the *Amellus* varieties the palm must be given to *cassubicus*, *latifolius*, *ameloides*; *Onward*, dark blue; *bessarabicus*, which is well known and justly prized; *Framfieldi*, and *Riverslea*. *Novi-Belgii* section yields *T. S. Ware*, with lavender flowers shaded with a pink tone; *Arcturus*, bright violet blue; *Calliope*, immense heads of rich mauve flowers; *Harper Crewe*, white with yellow centre; *Madonna*, large white; *William Bowman*, rich rosy purple in colour; *Autumn Glory* and *Apollo*, both with blue flowers; *Candida*, another grand white; *Florina*, medium height, white; *formosissimus*, one of the best of all, having enormous violet-coloured flowers; *Purity*, one of the largest and best of all whites; *White Spray*, long graceful sprays of creamy flowers; *William Marshall*, pale blue; and *Robert Parker*, which is lilac-purple. *Theodora* resembles *William Marshall*; *Mayi* also approximates, but is taller. The foregoing are decidedly meritorious, and there are also *superbus*, *Paul Lyonnaise*, *Snowflake*, and *Archer Hind*. *Novæ-Angliæ* *Diadem* is a good purple; Mrs. J. F. Rayner is the finest red, and is both early and dwarf. W. Bowman, purple, is excellent, and others of a similar shade include *præcox*, *Precocité*, and *Diadem*, already named. *N.-A. ruber* and *roseus* have both succeeded admirably in pots.

Other good varieties noted at Ryecroft were *A. vimineus*, which resembles *ericoides*, being graceful and feathery; *paniculata laxa*, also pretty, and elegant in form; *puniceus*, one of the dwarfest and earliest; *ericoides densiflorus*, dwarf, dense, and with white flowers; and *A. c. Clio*, which is exceedingly small and slender. The varieties found in greatest duplication were *Perle Lyonnaise*, *Harper Crewe*, *Candida*, and *Purity*. The difficulty, of course, is to decide which is the true type or variety. Among others that were brought to notice, but not placed in any special section, were the lovely new *Coombe Fishacre*, with flesh-coloured flowers very distinct, and certainly one of the best Asters that can be chosen. *A. Tradescanti* bears long graceful sprays of small white flowers, and *umbellatus* has very large and handsome heads.—WANDERING WILLIE.

Gooseberry Whinham's Industry.

The variety, Whinham's Industry, is known and grown, both in the North, South, and in the Midlands. As a market Gooseberry it is largely cultivated, and bears heavy crops with great persistency. The fruits are large and roundish-oval in shape, dark red and showy, as typified in the illustration on page 467. The habit of growth is erect, and finely spreading bushes are easily produced. Both for cooking purposes in a green state, or for dessert, Whinham's Industry stands in high excellence.

Societies.

Royal Horticultural—Scientific Committee, Nov. 12th.

Present: Dr. M. T. Masters (in the chair); Messrs. Odell, Chapman, Saunders, Bowles, and Michael; Drs. Rundle and Cooke; Revs. W. Wilks, and G. Henslow, Hon. Sec.

Stellate Coccid.—With reference to the specimens brought by Mr. Odell to the last meeting, Mr. Robt. Newstead reports as follows:—"The Coccid on *Cypripedium* is the *Vinsonia stellifera*, Westwood, 'The Star Scale.' It is known from both hemispheres, but has been found most abundantly in the West Indies. The specimen sent was a male puparia, and one contains an imago ready to emerge. They are both new to science." Mr. Odell added that the species of Orchid was *C. Godfreyæ* var. *leucochrysum*. It was imported some six months ago, but the exact locality was not known. Dr. Masters suggested Cochin China as being the native country of that species of Orchid.

Worms in soil.—Mr. Saunders reported as follows upon specimens sent to the last meeting by Mr. Baker, of Henbury, Bristol:—"As regards the worms sent by Mr. Baker, of Henbury, I hear from Mr. F. E. Beddard, our best authority on these animals, that they are not young earthworms. He says the worms you sent me are members of the family *Enchytraidæ*, not earthworms in the strict sense. I think that they do injure living plants—at least, some of the many species of the family do. I am not certain what particular species it is that you have sent me. To identify them is rather a troublesome job, because of the numbers that are known, and the slightness of the characters that sometimes distinguish species. When I sent them to Mr. Beddard I told him not to trouble about the specific name if it would give him much trouble to do so. I have written to Mr. Baker, and told him what the worms are; and recommended him to water thoroughly with lime water, or a solution of 1 oz. of corrosive sublimate and 40 gallons of water, to turn up the soil well so that the birds might get at them, and to turn poultry in if practicable."

Fern fronds.—Dr. M. C. Cooke reported upon specimens sent to the last meeting:—"The two Fern fronds were examined, and the spots, like those caused by rain drips, showed no sign of fungus or mycelium, and I am convinced that the cause must be sought in the surroundings."

Vine leaf.—Dr. Cooke also reports as follows:—"Two objects on the leaf attracted my attention. The one was small black superficial spots, which were something like grains of gunpowder in appearance. They had no adhesion to the leaf, were quite amorphous under the microscope, and probably were only insect 'frass.' The other object was small discoloured spots about half an inch in diameter, and of a dingy olive. On attempting to remove a portion on the point of a penknife it flaked off in pieces, and left the leaf beneath quite green and uninjured. It could all be wiped from the leaf, as there was no attachment. The object proved to be a network of brown mycelium, with the slender threads and spores of a species of delicate *Cladosporium*. As it was wholly superficial I did not attempt its specific determination, since it could not inflict injury on the Vine, and could be readily wiped away." The thanks of the committee were given to Dr. Cooke for these investigations.

Club-root fungicide.—Rev. W. Wilks inquired, on behalf of a correspondent, whether lime cures this disease, as some farmers consider its prevalence to a want of lime in the soil. Mr. Odell said that gas lime was effective, as it is also for wireworm, but doubted the value of lime itself. Dr. Masters observed that Wallflowers which grow on chalk are very liable to the disease, and attributed the destruction of the fungus to the sulphur in the gas lime, and not to the lime itself.

Effects of London Fog upon Orchids.—Mr. Chapman brought specimens of the flowers of *Cypripedium insigne*, a more hardy mountain species, which was quite uninjured; similarly of *Odontoglossums*, he scarcely lost a plant in bud, whereas warmer sorts of *Cypripediums* had their flowers limp and collapsed.

Galls.—Dr. M. C. Cooke exhibited specimens of two kinds of galls; one from Oaks, and a second off certain members of the *Anacardiaceæ*.

Carnations Diseased.—Mr. Douglas sent some plants, which were referred to Dr. Cooke for examination and report.

Narcissus bulbs decaying.—Some bulbs were received, apparently attacked by some grub at the apex. Mr. Saunders undertook to examine them.

Maple branches coherent.—Dr. Masters exhibited a forking Maple

branch, which another had apparently pierced. It was suggested that the latter had been caught in the fork, and by growth had split the main stem below it, then this had healed up all over the shoot. The position of the inserted bough was rather below that of the other two, which formed the angle between them. Rev. W. Wilks said that he knew of a very similar occurrence in an Oak tree, but the bough was a very large one in that case.

Apple spotted.—Dr. Masters exhibited an Apple covered with black spots. Dr. Cooke observed that they were the early stage of a fungus, *Labrella pomi*.

Skimmia Fortunei.—Dr. Masters showed a fruiting spray of this plant, and observed that although it had been shown that the names *S. japonica* and *S. oblata* were erroneous, gardeners still persisted in calling it by this latter name.

Beech leaves with galls.—Mr. Odell showed leaves with galls of a small gnat-like fly, *Hormomyia piligera*, one of the *Cecidomyidæ*. A peculiarity in the autumnal colouring of the leaves was, that while all the rest of the blade was orange coloured, the portion near the galls, or the upper half of the leaf beyond them, was still bright green. This retention of the chlorophyll was apparently due to the stimulus produced by the local irritation set up by the presence of the galls.

Plants from Botanical Gardens, Cambridge.—Mr. R. Irwin Lynch sent the following for exhibition:—*Gerbera*, a new var. "Sir Michael" ("Gard. Chron.," September 21, 1901, p. 223). It belongs to the tribe *Mutisiaceæ*, three-fourths of the species being African, the rest (of twenty) occur in Asia and E. T. The disk florets are peculiar in having two thread-like petals on one side, and three longer ones on the other. It may be noticed that this condition sometimes occurs in the transitional state of disk florets in semi-double Daisies, &c. *Plectranthus saccatus*, a new introduction to Cambridge, the flower being exceptionally large for the genus. It was received from the Cape. *Lotus glaucus*, *Ait.* (referred to "Journal of Botany," 1897, p. 382). *Pancratium canariense*. *Lindenbergia grandiflora*, introduced to Cambridge 1900 ("Bot. Mag.," 1900, t. 7738). *Nat. Ord.*, *Scrophulariaceæ*. The genus embraces eight species—E. Africa, Arabia, India, and Malay Arch. The present species has yellow flowers, resembling those of *Mimulus*, but is devoid of the two sensitive stigmatic lobes, the stigma being globular.

Plants from Botanical Gardens, Dublin.—Mr. F. W. Burbidge sent the following for exhibition:—*Colletia Benthiana*, a plant of dwarfer and finer growth than *C. ferox*. It bore three leaves upon the spines. *Rubus australis*, in three forms—viz., var. *foliosa*, with large leaflets; var. *intermedia*, with very small ones; and the ordinary form with none at all. Natives of Australia. *Apera arundinaria*, *Hook.*, the "Pheasant's-tail" Grass of the island New Zealand; the autumn tints of red and brown are very pronounced ("Gard. Chron.," vol. xxii., October 23, 1897, p. 283, fig. 84). *Hypoxis hemerocallidea* (= *H. elata*, "Bot. Mag."). A point to be observed is the circumscissile dehiscence of the ovary. It has been grown in the open at Dublin for seven years. *Narcissus Tazetta*, a variety always blossoming in November and December in the open air, but near a warm plant house. It is remarkable for the great length of stem and foliage. *Laurelia aromatica*, the "Chilian Sweet Bay." The leaves are highly aromatic if bruised. It makes an open air shrub at Wieklow 25 feet high, and is useful as a pot or tub plant in a conservatory. The genus has only two species—one in Chili, the other in New Zealand, indicating (with *Fuchsia*) a former connection between these places. It belongs to the Order *Monimiaceæ*. *Azolla filiculoides* has lived for years in muddy tanks. If introduced in a pond it is difficult to eradicate, from its hardy nature and great multiplication. *Acacia melanoxylon* (?), showing compound blades upon several of the phyllodes, an unusual feature in Australian species. *Parochætus communis*, "Indian Shamrock," remarkable for the perfectly straight peduncles, which become strongly bent in fruit, as if to bury the legumes like *Arachis*.

Barnsley Chrysanthemum, November 5th and 6th.

Signal success attended the fifteenth annual exhibition of Chrysanthemums of the Barnsley Society on Thursday and Friday in last week. There was a record entry of 280, as against 179 last year, and the general verdict was that the quality of exhibits was a decided improvement. The committee had also arranged for a good social programme, with the result that the receipts, too, were a record, and more valuable prizes are at once assured for next year's show. Messrs. J. P. Leadbeater, Tranby Croft, and W. Tunnington, Calderstone, Liverpool, were the judges, and the former gave an interesting essay on "The Manipulation of the Chrysanthemum," to a large audience. Mr. W. B. Armitage, the genial secretary, spared no effort to make the show the success it achieved. The principal prizetakers were Mr. A. Alderman, gardener to Mr. J. D. Ellis, of Worksop (who took seven firsts, and his incurved varieties were indeed beautiful specimens both in form and colour); Messrs. T. Ketchell (Mr. C. H. Simpson, Aekworth); A. Brookes (Countess of Rosse, Womersley Park); A. E. Wilson (Mrs. Guy Senior, Beevor Hall); E. Hill (Mrs. Norris, Beechfield, Doneaster); W. H. Smith (Mr. T. B. Lawrance, Longcar Park); E. Foster (Mr. R. Bury, Manor House, Ardesley); J. Findley (Mr. R. Heywood-Jones, Badesworth, Pontefract); W. Michael (Mr. A. P. Woodruff, Barnesley); and Mr. R. K. Micklethwait, Ardesley House.—W. N.



GOOSEBERRY. WHINHAM'S INDUSTRY.

Royal Horticultural of Ireland, Nov. 6th and 7th.

The winter show of the above was held on the 6th and 7th of the present month, in the central hall of the Royal Dublin Society's quarters, Ballsbridge.

PLANTS.—For a stand of Chrysanthemums, not to exceed thirty pots, the first prize was taken by Mr. J. Goff, gardener to Mrs. McCann, Simonscourt Castle, Donnybrook. The Lord Ardilaun Challenge Cup, value £10, for a group of Chrysanthemums, not more than thirty-six pots, becomes the property of Mr. R. Geoghegan, gardener to John Miller, Esq., Baggottrath House, Sandymount, who has led for the past three successive years. For three well-grown Chrysanthemums, Mr. Cavanagh, gardener to R. W. Booth, Esq., Victoria House, Dalkey, easily out-distanced his competitors; the second award went to Mr. J. Goff, gardener to Mrs. McCann, Donnybrook, with fine bushy plants. Mr. Cavanagh again wrested the premier place with ease for the three pots of pompons, the plants of Sœur Melanie and Mrs. Bateman being profusely flowered; while for second place, Mr. Tinegar, gardener to Miss Cotton, Hollywood, Dundrum, showed some nice medium plants.

CUT BLOOMS.—The society's Silver Medal, and £5, for a stand of thirty-six Japs, was awarded to Mr. Mitchison, gardener to Hon. Colonel Crichton, Mullaboden, Ballymore-Eustace, with an even lot of blooms. For second place, Mr. Andrew Porter followed closely; whilst Mr. A. E. Bennett, Warrenscourt, was third. The classes for the twelve vases, in a similar number of varieties, consisting of three blooms of each, did not evoke considerable competition. The premier prize is a Silver Challenge Cup, value ten guineas, known as the Waterhouse Cup, and is supplemented by a money prize of £5. The collection of Lord Ashtown, staged by Mr. A. Porter, was an unquestioned first, with good well-built flowers of *Australie*, Mr. J. Carrington, Lady Ridgway, Nellie Pockett, W. R. Church, and J. Molyneux; second, A. Pim, Esq., Bellevue, Blackrock (gardener, Mr. J. O'Connor); and third, Mr. Tyndall. For a collection of twenty-four cut blooms, distinct, Mr. Mitchison again led with an even box. He was closely followed by Mr. Bradshaw. In the class for twelve cut blooms, comprising not less than six varieties, the box of blooms staged by Mr. P. Harper was an unquestioned first; Mr. J. Cavanagh was a very close second, his bloom of *Madame Gustave Henry* was by far the best bloom displayed. For six white Japs, the box of *Madame Gustave Henry* staged by Mr. Bradshaw was placed first. For a similar stand of Japs, yellows, Mr. Webster, Oldconna, Bray, was first with good substantial blooms of *Edith Tabor*. For twelve Japs in same number of varieties, first prize went to Mr. Thomas McDonald, Greenhills, Drogheda, with choice blooms of Mrs. C. H. Payne, Mrs. G. W. Palmer, and Princesse B. de Bramcovan; and second, Mr. Bradshaw. For a stand of twelve varieties of incurved, the box of Mr. Webster, Bray, was first. The following were choice flowers, though medium sized: C. H. Curtis, Lady Isabel, *Madame J. Ferlat*, J. Agate, and *Duchess of Fife*. Mr. M. Reilly, St. George's, Killiney, was second with a nice box, but the flowers were on the small side. For a stand of six incurveds any colour, one variety, the six blooms of Lady Isabel, staged by Mrs. A. E. Bennett, were awarded premier honours. They had depth, size, and were compactly built, with a fine finish, and showed the possibility of incurveds when well grown. For pompons, twelve bunches in at least six varieties, Mr. J. Cavanagh, Dalkey, was first, *Black Douglas*, *Antoninus*, and *W. Kennedy* were the best. For the six sprays of single Chrysanthemums for the Wells Silver Bronze Medals, the following were first and second respectively—Mr. Rigg, gardener to Lord Cloncurry, Lyons, County Kildare; Mr. Tyndall, gardener to Cecil Roche Burrows, Esq., Giltown, County Kildare.

For the twelve blooms of Carnations, *Malmaisons* excluded, Mr. Rigg, gardener to Lord Cloncurry, was an easy first with excellent blooms of *Belle Lillimar*, Mrs. Llewellyn, Cardinal Wolseley, Princess de Monaco; whilst two seedlings deserve mention. They possessed a white ground, flaked very slightly with purplish rose, the streaks reaching midway on the florets, the blooms of great substance, the calyx only splits slightly. Mr. Toner was first for tree Carnations with Mrs. Lawson, Winter Cheer, Countess of Warwick, and *Madame Thérèse Franco*; he likewise took premier place in the dinner-table decoration with a truly artistic group. The Ardilaun Silver Challenge Cup, value £5, for twelve pots of Cyclamen, for the stand erected by Mr. Samuel Davis, Obelisk Park, Blackrock, was fine. The judges noted on this stand the adjective "superb," which was a true description. He also took premier place for the six table plants.

The majority of the varied classes of fruit are allotted for small exhibits. In the Grape class for four bunches of Grapes, Messrs. Thompson's prize was accorded to Mr. Andrew Porter, Galway, with medium-sized bunches of Muscat of Alexandria and Black Alicante. The latter took premier place for six dessert Pears. For the collection of dessert Pears in twelve varieties, four of each variety, Mr. R. McKenna was first, Mr. Hartley being second; whilst, for six varieties, Mr. Long was an easy first. Mr. Tyndall was second. For a collection of twelve varieties of Apples in dishes of six each—six baking and six

dessert—Mr. Bradshaw was first with fine fruit. Mr. Hartley was a close second. For dishes of dessert Apples, first went to W. P. R. Orr, Esq., second to Colonel Clements, Killadoon, Colbridge; whilst Mr. R. McKenna occupied premier place for the four dishes of dessert Apples.

The vegetables were all fine, and embraced a wide range of small exhibits. The Drummond prizes, for a collection of vegetables, went (first) to Mr. Nevin Stringer, gardener to General Sir Robert Palmer, Bart, Kenmure Park, Rush, and (second) to Mr. Andrew Parker. For smaller collections of vegetables in six distinct kinds, first award went to Mr. David Kirk, closely followed by Mr. George Bogie.

The varied nursery exhibits formed a feature. Amongst the many selected for mention, Messrs. Ramsay and Son, Ballsbridge, had an oval embankment of flowers and foliage plants. Messrs. Alexander Dickson and Sons, Limited, Belfast, had a comprehensive array of fruits, Grapes, Quinces, Medlars, Apples, and Pears, close on 200 dishes, and secured the nurserymen's award. They likewise had an uncommon exhibit of Conifers and ornamental shrubs, planted in a miniature shrubbery, containing *Pittosporum Mayi*, *Veronica buxifolia*, Thuyas, *Phormium tenax variegata*, *Retinosporas*, &c. They were specially commended for high merit.

Messrs. McKenzie and Sons had a choice array of Apples and Pears (Award of Merit). Messrs. Tait, Capel Street, had a very fine exhibit of fruit; the collection included all standard varieties, and received an Award of Merit.

Messrs. Watson and Sons, Clontarf, had a choice group of hardy flowering Chrysanthemums (Silver Medal).

Messrs. Rivers and Son, Sawbridgeworth, Herts, through their town agents, Messrs. Edmonson, had a comprehensive collection. Amongst the many the following seedling Pears deserve note: *Magnate*, with large fruit, shaped like the *Beurré* varieties; *St. Luke*, an equally fine-looking fruit; whilst *Conference*, a tapering fruit, not unlike a *Jargonelle* in build, of dark green hue, tinged russet, was also on view. The stand was highly commended.

Messrs. Mackey and Sons, Sackville Street, had a meritorious group, comprising standard types of fruit, vegetables—Potatoes, over fifty varieties—the whole being tastefully set out with *Kentias* and *Begonia Gloire de Lorraine* (Gold Medal). The show was extensively patronised.—A. O'N.

Chester Paxton, November 12th.

On Tuesday afternoon, November 12, the High Sheriff of Cheshire (Mr. Thomas Brocklebank) opened the thirteenth annual fruit and Chrysanthemum exhibition under the auspices of this society. As on previous occasions, all the available space at the Town Hall was taxed to its utmost capacity to accommodate what was undoubtedly a very delightful display of fruit and Chrysanthemums. The fruit was of a very high standard of excellence. Apples and Pears, although not quite the size of previous years, were of a higher colour. The entries were quite up to the average in every respect, and this was especially gratifying considering that in many of the districts the dry season has had an adverse effect upon the culture of good fruit. One of the principal features of the exhibition was the groups of Chrysanthemums. During the last few years the much-coveted prize for the best group has been carried off time after time by Mr. Edwin Stubbs, gardener to the late Mrs. Hudson, and now gardener to Captain MacGillycuddy, of Bache Hall. His fellow competitors were determined in a friendly spirit to oust him from his enviable position, but they have failed to do so, the judges experiencing no difficulty in awarding him once more first honours. The three remaining groups, all effective, gave the judges a considerable amount of trouble. After weighing carefully all the points, they gave the second prize to the County Asylum (per Mr. A. Ellis, gardener), the third to Mr. T. Gibbons Frost, of Mollington Banastre (per Mr. T. Gilbert), and the fourth to Mr. Edward Dixon, Littleton Hall (per Mr. John Dutton). The judges—Messrs. P. Blair, head gardener to His Grace the Duke of Sutherland, and Flack, head gardener to the Marquis of Cholmondeley—both of wide experience, stated that they had never before adjudicated upon such excellent groups. They were loud in their praise of both the quality of the bloom and the artistic arrangement.

The entries for Grapes were considerably in advance of previous years, the black varieties especially showing a quality of bloom rarely to be seen at this late period of the year. Captain MacGillycuddy captured the first prize with bunches which were not only the largest, but showed a bloom and general finish that were superior to any others. There were five competitors in the white Grapes class, Sir George Meyrick carrying off the principal award. Turning to the fruit, in the gardeners' section the principal prize was that offered for twenty-four distinct varieties of Apples. Only two competitors entered, but both showed collections of a very high order of merit. First honours went to Mrs. Townsend Ince, the Rev. L. Garnett (Christleton) being second. In the class for twelve distinct varieties of kitchen Apples, Mr. J. Saunderson (Bodnant) easily took first.

honours, while Major Feilden was principally successful in the six distinct varieties with excellent samples, such as Peasgood's Nonesuch showing remarkably fine finish. In the dessert classes the colour all through was exceptionally fine. The queen of British dessert Apples, Ribston Pippin, was a special feature. The first prize dish, from the Rev. L. Garnett, was specially good. With Blenheim Mr. Saunderson was chief winner.

It is many years since such a high quality of Pears had been seen at these exhibitions. The competition was keener than usual this year. For the collection of six distinct varieties the Rev. L. Garnett had no difficulty in carrying off first honours, his Pitmaston Duchess and Marie Louise were exceptionally fine. The old favourite, Marie Louise, was well represented in the single dishes, and here Mr. J. W. Macfie, of Rowton Hall, captured the first prize with a beautiful dish; an old competitor in Mr. John Thompson taking the second. Pitmaston Duchess, a very large Pear, was also well represented, chief honours going to Major Feilden, Mrs. Townsend Ince, and the Rev. L. Garnett. The two exhibits in the nurserymen's section for the best fifty dishes of Apples were splendid. The honorary exhibits included a large table sent by the Duke of Westminster (per Mr. N. F. Barnes, who is this year president of the society). This table showed a wealth of bloom and artistic arrangement that could scarcely be surpassed, the Grapes, Apples, and Chrysanthemums being most meritorious. At the other end of the room Messrs. Dicksons, Limited, occupied a 20ft space with a miscellaneous exhibit of flowering and foliage plants, fruit, &c. Messrs. McHattie and Co. also staged foliage and flowering plants as well as fruit. Mr. F. W. Dutton of Queen's Park Nurseries, showed an excellent collection of greenhouse Ferns.

Sutton Chrysanthemum, November 12th and 13th.

The promoters of this eighth annual show, which was held in the Public Hall at Sutton, were unfortunate in having bad weather. The entries were slightly behind the number that came forward last year, being 202 as against 220. For a group of Chrysanthemums Mr. J. Cook led, this prize carrying with it the Tradesmen's Silver Challenge Bowl. Mr. H. E. Gates took second prize. For a miscellaneous group of plants the first award was annexed by Mr. H. H. Cutts, who staged Begonias, Orchids, Codiaums, and other ornamental plants. A bloom of the variety Mrs. Weeks secured the Society's Medal for Mr. J. Aeock, awarded for the best bloom in the show. Mr. Aeock was chief winner in the open class for eighteen Japanese blooms, and staged a capital collection of the best popular varieties. Second prize fell to Mr. G. Hunt, of Ashstead Park. The latter led for the dozen distinct Japs, followed by Mr. E. Peters, and had also the best dozen incurved blooms. The classes for Cyclamen, Primulas, fruit, and vegetables were creditably supported. After the judging on Tuesday afternoon the committee, judges, and other officials adjourned to the Cock Hotel, where lunch was served under Mr. L. Blade's presidency.

Ventnor, Isle of Wight, November 12th and 13th.

The sixth annual exhibition was held at the Town Hall, Ventnor, on Tuesday and Wednesday, November 12 and 13, and was very successful in every way. The exhibition was opened by Mrs. Morgan Richards, who very materially assisted the society by her purse and presence. The Hon. J. E. Gordon, M.P., made a very appropriate speech at the opening. In the open class for twenty-four Japanese Mr. Martin Silsbury, Shanklin, won the Silver Cup, in addition to the money prize, Mr. C. Snook, gardener to Mrs. Scaramanga, Shanklin, being a close second with Mr. S. Prismall, gardener to Mrs. R. Cecil, Ryde, third. For six Japs Mr. C. Snook was first and Mr. Silsbury second. In the class for twelve incurveds Mr. Prismall led, and Mr. W. W. Sheath, gardener to Miss Mitchell, and Mr. R. Joliffe were equal seconds. For a dozen Japs Mr. W. W. Sheath beat Mr. Silsbury, Mr. Wm. Howard, Shanklin, coming third. Mr. C. Snook was first in the class for nine blooms in variety, Mr. C. H. Coombes second. For six large Anemones Mr. W. W. Sheath was first; and for six bunches of pompons Mr. G. Honeybourne, gardener to Lady Daly, Ryde, was in the forefront; Mr. W. W. Sheath second, and Mr. C. H. Coombes third.

In the class for hand bouquet, epergnes, and table decorations Mrs. D. Day, Bonchurch, took the lead in all three, showing very good taste. Mrs. Attrill, Mr. H. Drover, and Miss Blake were also successful. For a basket of autumn foliage and berries Miss Blake was first with a pretty arrangement. Mr. W. W. Sheath and Mr. Attrill were the only exhibitors of plants, and they divided the honours between them. The former won for a group of Chrysanthemum and foliage plants, and Mr. Sheath also won the Toogood's Silver Medal as the most successful exhibitor in the show. The amateur classes were very well filled, and there were also some good dishes of fruit shown. The non-competitive collections added very much to the attraction of the exhibition. Mr. T. Gibbs, C.A., who takes a great interest in fruit-growing in the Islands was very successful. Mr. F. S. Vallis, the cham-

pion grower from Bromham, sent six of his prize blooms from the N.C.S. Exhibition, and these were very much admired.—C. O.

Birmingham, November 12th, 13th, and 14th.

Again the spacious Bingley Hall was laid under contribution for the annual gigantic display of Chrysanthemums, fruit, and vegetables on the above dates. The incurveds were above average merit, and a similar remark applies to the Japanese blooms, arranged with long stems in vases. At the National Chrysanthemum Society's Show a specially provided low range of staging is apportioned for this special class; also vases, all of one uniform height. The committee would do well to adopt the suggestion of having convenient tables and vases of one size and height for exhibitors.

Groups of Chrysanthemum plants, arranged for effect, were again a leading feature, and the previous winner (Mr. W. Thomson, gardener to J. Whitfield, Esq., Molesey) was warmly complimented thereon. His success was rendered all the more notable, as it was undoubtedly the finest on the whole ever exhibited at Birmingham, and was par excellence the feature of the show. The second prize exhibit of Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston, was a close entry. Mr. F. W. Seaton, Edgbaston, was third. An agreeable surprise was a splendid and large collection of Orchids, occupying staging about 30ft by 4ft, by a newcomer, Mr. H. Whateley, Kenilworth. Several choice Cypripediums were noticed in this, the biggest collection ever exhibited by one exhibitor in Birmingham. "Floral displays" were again an attractive feature, and reflected much credit upon Messrs. John Hughes, Harborne; J. Crook, Birmingham; and Hewitt and Co., whilst Messrs. Perkins and Son, of Coventry, were responsible for the only bouquet in the nurseryman's class, composed, as it was, of Orchids alone. Fruits were extensively and excellently shown, and, numerous and high-class as they have been for many years past, vegetables eclipsed previous events both in quantity and quality, which is saying a great deal, thanks to the enterprise of Messrs. Robert Sydenham, Messrs. Sutton and Son, Messrs. Webb and Sons, Messrs. John Pope and Son, and Messrs. Simpson and Sons, who offered attractive prizes for collections and single dishes of vegetables, thus relieving the committee exchequer. A seductive attraction, too, was Mr. R. Sydenham's (open) Silver Challenge Bowl, value £15, and the Local Challenge Bowl, value £10.

As usual, trained specimen Chrysanthemum plants formed one of the principal features, and the leading set of nine large flowering plants (Japanese excluded), exhibited by that old experienced exhibitor of Chrysanthemum plants, Mr. Oliver Brassier, Edgbaston, elicited the especial commendations of the delegates from the National Chrysanthemum Society, and who were invited to the judges' and public luncheon, presided over by G. H. Kenrick, Esq., Edgbaston, another distinguished visitor being Mr. Pockett, of Australia, and who expressed himself as well pleased by his visit.

It should have been remarked that the committee (owing to prudential motives) elected to reduce the money value of the prizes in the various classes, excepting those for groups of plants and entirely in the "floral display" class, substituting instead medals for honorary exhibits. The reduction in question may partly account for the fewer exhibits than usual in the Chrysanthemum bloom classes.

Cut Blooms.—There were only four exhibits of twenty-four blooms of Japanese distinct, and Mr. C. Crooks, gardener to the Dowager Lady Hindlip, Droitwich, supplanted Mr. A. Chandler, gardener to A. James, Esq., Rugby, his successful opponent on the occasion last year, by taking the premier prize. It is to be regretted that the ordinary staging boards do not allow more space for a better and more effective display of the Japanese section. The second prize was adjudged Mr. A. Chandler, with a very close set. In the class for eighteen blooms Mr. W. L. Bastin, Farringdon, was placed first, the second prize going to Mr. C. L. Branson. For twenty-four blooms, incurved, Mr. C. Crooks again vanquished his erstwhile opponent Mr. Chandler, by securing the first prize with perhaps the very best set ever exhibited at Birmingham, the foregoing pronouncement being qualified by that of the oldest of Birmingham's judges in the cut bloom division of Chrysanthemums. The second prize was well won by Mr. W. L. Bastin. For twelve incurved, distinct, Mr. A. Chandler was first with a nice set, second Mr. C. Batchelor. For twelve Japanese Mr. A. Chandler won with a superior lot.

There was not a numerous lot of exhibitors in the classes for blooms on long stands in vases. For six blooms of white Japanese, any one variety, Mr. Chandler was to the fore with a splendid exhibit; second, Mr. C. Batchelor; third, Mr. O. Brassier. For any one variety of yellow Japanese Mr. Chandler was again to the front. There was also a very good competition in the minor remaining classes, space forbidding details, unless mention may be made of the class for twelve blooms Japanese distinct, on long stems, arranged with any show of foliage and small Palms in pots. Here Mr. R. Bullock was first with a tasteful arrangement; second, Mr. A. Cryer with a close exhibit; third, Mr. O. Brassier. There

were ten dinner-table decorations of Chrysanthemums, but being of a mediocre nature do not claim special detail, and we have seen superior on previous occasions here. Specimen Palms, as usual, were finely shown, and added considerably to the decorative effect of the hall. Primulas were unusually good, the successful exhibitors being Messrs. Thomson and Co., Messrs. John Pope and Son, Mr. A. Cryer, and Mr. O. Oliver, whilst Mr. R. Chatwin Cartwright, King's Norton, was the winner of the first prize and only entrant for Cyclamen in pots. Table plants were most creditably exhibited. Fruit was extremely well shown both by competitors and the trade, and on the whole never excelled here.

The chief feature was the grand collection of British-grown fruit, not to occupy a space exceeding 40 sq ft, plants and foliage admissible. Here Mr. F. Jordan, gardener to the executors of the late John Corbett, Esq., Impney Hall, Droitwich, distinguished himself with a grand display, containing fine bunches of Muscat of Alexandria, Gros Guillaume, Alicante, and Gros Colman Grapes, Pines, Melons, Apples, Pears, Plums, and Nuts; the second prize to Mr. J. Read, gardener to the Earl of Carnarvon, Bretby Park, the collection consisting of very good Grapes, Apples, and Pears only. A special award was made to Mr. Jordan for a very fine bunch of ripe Bananas. Mr. E. Crump, of Leamington, exhibited fine bunches and beautifully finished berries of his new seedling Grape, "Royal Leamington," a cross between Gros Colman and Black Alicante. Grapes were on the whole capitally exhibited, and not an inferior bunch to be seen. The principal prizewinners were Messrs. Goodacre, F. Jordan, J. Jones, W. H. Kellard, A. K. Griffiths, and G. Mullins.

Apples were unusually well staged, and for six dishes of dessert varieties Mr. G. Mullins was first with beautifully coloured example of Ribston Pippin, Cox's Orange Pippin, Blenheim Pippin, King of the Pippins, Wealthy, and Monmouth Beauty; second, Mr. T. Kean, Warwick; third, Mr. F. Jordan. Culinary Apples were remarkably fine, and the first prize for six dishes was adjudged Mr. F. Jordan. Pears were good throughout. For eight dishes, dessert, Mr. F. Jordan led the way with a Buerré Diel, Pitmaston Duchess, Doyenné du Comice, &c.; second, Mr. G. Mullins. For four dishes of Pears Mr. G. Mullins was to the front. As already alluded to, the competition in the vegetable classes was exceedingly keen, and when it is mentioned that such notabilities as Messrs. Beckett and Read were represented some idea may be entertained as to the quality of the exhibits. Mr. Robert Sydenham's open Challenge Bowl was secured by Mr. J. Read, gardener to the Earl of Carnarvon. It should be remarked that in Messrs. Thomson and Co.'s honorary exhibit of plants a striking feature was a large pyramid of *Salvia splendens grandiflora* plants, resembling a well-grown specimen plant, about 9ft high, thus forming an object of great attraction. Mr. J. Udale's collection of dried fruits also formed an interesting and instructive object lesson, and the superior quality of the English Plums over the French was very obvious.

In the arrangements of the exhibition a meed of praise is due Mr. W. B. Latham (chairman), Messrs. J. Hughes and Son (secretary and assistant secretary), and the remainder of the hard-working committee.

MEDALS AND CERTIFICATES.—The following were awarded gold medals:—Mr. H. Whateley, Kenilworth, Orchids; Messrs. Hewitt and Co., floral display and collection of shrubs; Mr. T. Hughes, floral display; Mr. J. Crook, floral display; Messrs. Richard Smith and Co., fruit, flowering plants, and shrubs; Messrs. Thomson and Co., collection of vegetables, flowering and other plants; Messrs. Webb and Sons, miscellaneous plants, Potatoes, and Onions; Mr. John Basham, collection of fruit; Messrs. Yates and Sons, collection of vegetables; Messrs. W. and J. Brown, collection of fruit; Mr. W. J. Godfrey, collection of cut Chrysanthemums and flowers; Messrs. Pewtress Bros., collection of Apples. Silver medals were awarded as follows:—Messrs. Pope and Sons, floral designs and collection of Ferns; Worcestershire County Council, collection of dried fruits and preserves; The Vineries, Acock's Green, collection of ornamental Gourds and Tomatoes; Mr. H. Deveril, Banbury, collection of Onions and Zonal Geraniums; Messrs. Weeks and Co., collection of cut Chrysanthemum flowers; Mr. J. Smith, collection of Gourds; Mr. W. B. Child, collection of shrubs and alpine plants; King's Acre Nursery Company, collection of Apples. Certificates of merit were received by the following: Mr. Isaac House, collection of Violets; Messrs. W. Wells and Co., collection of Chrysanthemum cut flowers; the Forest Supply Association, collection of fruit, vegetables, and dried fruits.

Reading Chrysanthemum, November 13th.

There is always an attractive Chrysanthemum show at Reading, though the subjects have to be broken up owing to the new and the old Town Halls being requisitioned for the purpose. The light is not good at the old Town Hall, and the judges discharge their duties under some difficulty. In the centre of the new Town Hall there was one very fine and attractive group of Chrysanthemums and foliage plants, the only one competing for

the handsome Challenge Cup and prize of £5. It was won this year, as last, by Mr. Galt, gardener to C. E. Keyser, Esq., the president of the society. Mr. Perkins, gardener to the Hon. W. F. D. Smith, M.P., Greenlands, Henley-on-Thames, won it in 1898-99, and if either of these win the next year the cup becomes their property, so we may anticipate a brave fight a year hence.

Round the hall were arranged squares of bright Zonal Pelargoniums, berried plants, represented entirely by Solanums; Orchids, Palms, Callas, groups of cut Chrysanthemums, while Mrs. Phippen, the Reading Court florist, had some examples of her high-class handiwork. In the old Town Hall were the groups of Chrysanthemums fronted with foliage plants, very attractive as displaying patches of colour, but formal, of course. Good blooms were generally added to good cultivation. The most interesting were the groups of plants not disbudded. It was quite a brilliant one, of excellent quality, with which Mr. W. B. Moncks' gardener (J. Booker) took the first prize. One could have cut an enormous quantity of flower from it. Mr. Bland Garland was second. The pooriness of the specimen plants was amply compensated for by the fine character of the cut blooms of incurved and Japs. Mr. W. Higgs, of Fetcham Park, was there with a very fine twenty-four, among which Bonnie Dundee, Ma Perfection, Lady Isabel, and others were real beauties. Mr. Lane, King's Ride, Ascot, a good cultivator of the incurved, was first with a good twelve, and Mr. Cole, of Swallowfield Park, was second. The premier incurved was a very fine Lady Isabel.

Japs were very good. A very fine twenty-four gained the first prize for Mr. Wasley, gardener to J. B. Taylor, Esq., Basingstoke, Mr. Cole running him close with some finely developed blooms. There was a brisk competition in this class, and also in that for twelve blooms. Here Mr. Galt came in first with excellent flowers; Mr. Wasley was second. The best six Japs of one variety were Mrs. Barkley, from Mr. Galt. One bloom, which seemed to display all the latent possibilities of this noble variety, was selected as the premier. There were classes for Japs shown in vases, and the single varieties were very pretty. The ladies showed tasteful epergnes, and their baskets of autumn foliage and berries did them great credit.

There were several open classes for fruits—such as Grapes, Apples, and Pears—in which good fruit was shown. Cox's Orange Pippin holds its own as a dessert Apple; as a market fruit it is perhaps unrivalled. Who would not rejoice in the honour of having raised it? Space is exhausted, so this hasty report must close. The secretarial arrangements, made by Mr. Walker, were excellent, and Mr. J. Woolford was a perfect steward.

Bristol, November 13th and 14th.

The thirty-eighth annual show of the Bristol Chrysanthemum Society, held on the above dates in the new Colston Hall, was an unqualified success, thanks to the energy shown by Mr. W. Ellis Groves, the courteous secretary, and his large and able committee. Having the use of the large and small halls, and the grand tiers running nearly round the building, there was ample room for the exhibits to be properly staged, and both trade and private growers made best use of their opportunity.

In the class for thirty-six Japanese cut blooms there was a great competition, and here Mr. F. S. Vallis, of Chippenham, proved unassailable. His stand was a perfect one, the varieties selected by this very successful grower being Mrs. Mease, Mrs. Barkley, Lord Salisbury, M. Polovia, Ethel Fitzroy, Phœbus, Le Grand Dragon, W. R. Church, Nellie Pockett, Madame Carnot, Australie, Calvat's Sun, E. Molyneux, Boy Wild, J. Lewis, T. Carrington, Nelly Bean, M. Smith, Chenon de Léché, G. J. Warren, Suzie, Mrs. H. Weeks, Harry Weeks, and Calvat's Seedling. For second place Mr. Runnacles had a very fine stand, and Mr. W. G. Drake, of Cardiff, was a dangerously close third. Fourth, fifth, and sixth prizes were given, and altogether this was one of the finest classes ever seen in Bristol. For twenty-four incurved, His Serene Highness Prince Hatzfeldt (gardener, Mr. Bible) was first with a fine stand, his flowers showing remarkable depth and solidity. Duchess of Fife, Ialane, Miss M. Threlfel, Chas. Curtis, and Triomphe d'Été were his best flowers. For second place Mr. G. Runnacles put up a stand of large, but rather flat blooms, a trifle lacking in solidity; the same fault being noticeable in Mr. G. W. Drake's otherwise fine stand. In the class for twelve incurved there was very little falling off in quality, and I was pleased to see that the old West Country veteran, Mr. John Baylis, was placed first. A grand Mrs. Heale was, perhaps, the most perfectly modelled flower in the show, judging from the old standard of excellence in this class. Mr. J. D. Gunn and Mr. Humphries were second and third.

Mr. Gunn, Mr. D. E. Taylor, and Dr. Cropper took the prizes in the order named for twelve Japanese, and the last-named exhibitor was first in a well-filled class for incurved Japanese. Only three exhibitors competed in the class for twelve large flowered Anemones, and for these lovely varieties Colonel Vivian (gardener, Mr. W. Stagnell) won rather easily. The varieties in the winning stand were Halcyon (2), Enterprise (2), W. W. Aster (2), Descartes, Owen's Perfection, John Bunyan, Mabel

Millar, Grand Avclot, and Lady Margaret. W. Pithick, Esq., and Mr. Thos. Hobbs followed in the order named. J. Colthurst Godwin, Esq., won with G. J. Warren in the class for six, one variety; Prince Hatzfeldt was second with C. Pockett, and Mr. MacAdam Smith third with J. R. Upton. For the novelty class, which was rather a disappointing one, D. E. Taylor, Esq., showed Snowdrift, and was placed first. J. May, Esq., was second with Vicar of Leatherhead, a pretty bright yellow, third going to Mr. Runnacles for Mrs. A. Tate, a flat petalled yellow and brown variety, not particularly beautiful. The remaining cut flower classes were very well filled, but space will not admit of their being given in detail.

Groups arranged for effect were the one weak feature of a fine show. Mr. G. W. Horford was given first for a semicircular group of very beautifully grown plants, and this was as good as it was possible to make such a set arrangement. Foliage and flowers were alike excellent, but the second prize group, put up by Mr. Herbert Naish (gardener, Mr. Borrow) was wretchedly done, sticks, pots, and labels being as conspicuous as flowers. For a group of Chrysanthemums and foliage plants Mrs. St. Vincent Ames (gardener, Mr. H. Bannister) led somewhat easily, the only fault being a rather crowded arrangement. For a group of miscellaneous plants J. Colthurst Godwin, Esq., W. H. Wait, Esq., and Mrs. Wells were placed in the above order. Orchids formed an interesting feature, Alderman Howell Davies (gardener, Mr. Curtis) leading in the specimen class with a well-flowered *Cattleya labiata*, J. Barry, Esq., following with a healthy and fine variety of *Oncidium Forbesi*. Lieut.-Col. H. Carey Batten, Mr. Budgett, and Alderman Davies were the principal prizewinners in the other Orchid classes, which included some very fine specimens of *Cypripedium insigne*.

Wreaths, table decorations, hand bouquets, and sprays are always shown well at Bristol, but on the present occasion the display was truly magnificent. A lovely wreath was composed of white flowers with a relieving spot of *Cattleya*, while the first prize bouquet, from Mr. W. H. Coles, of Bishopstown, was in this well-known exhibitor's very best form—a rich profusion of choice Orchids tastefully arranged. Fruit was abundant and good, J. W. Fleming, Esq. (gardener, Mr. W. Mitchell), taking first for a collection of six dishes. Mrs. Pince Grapes and Doyenné du Comice Pears were his strongest points. F. Tagart Esq. (gardener, Mr. Binfield) was second, and Colonel Vivian, Rood Ashton (gardener, Mr. Strugnell) third in a very close competition. Single-dish classes of Apples and Pears were well filled: also Grapes, with the exception of Black Hamburgs. There were upwards of a dozen entered, but there was not a really good bunch among the lot.

The trade exhibits were worthy of more than a passing reference, Messrs. Sutton staging a grand collection of new and old varieties of Potatoes, for which they received the society's Gold Medal. Mr. Godfrey, of Exmouth, had a noble display of Chrysanthemums, Pelargoniums, and Carnations, Messrs. Garaway, of Bristol, an imposing stand of fruit and flowers, while Messrs. Brown and Sons, of Bristol, the proprietors of Canary Guano, Mr. Wells, of Redhill, and Messrs. Parker, of Bristol, all showed well and abundantly of their several specialities. The Bristol Amateur Gardeners also had a fine show, the quality of the exhibits in all the departments comparing quite favourably with those shown in the classes in the open. The whole show reflects the greatest credit on all concerned in its management.—H. R. R.

Hull, November 13th and 14th.

In the Artillery Barracks the eighteenth annual show was held, and if the entries were not quite so numerous as in some years past, the quality of the exhibits was quite up to the high standard of this society. Nowhere can such groups of Chrysanthemums and foliage plants be found as here. Special encouragement is given to the decoration of dinner tables. A special room is prepared for this phase of the show, in which the exhibits can be seen and judged under artificial light, as in the case of an ordinary dinner table. Special prizes are offered in this section, and the competition confined to ladies. At no show can such punctuality in clearing the room for the judges be found. On the stroke of ten o'clock, Mr. Dixon, one of the courteous hon. secretaries, is found in front of the clock, bell in hand, to give the warning note to the exhibitors. If some other societies were as punctual the labours of the judges would be made easier, and less cause for comment at the awards, perhaps.

Plants are here well shown. Special classes are made for what are known as "bush" plants and "cut backs," with a view to illustrate the value of the Chrysanthemum for decoration. In the former class, Mr. R. Thirsk, 11, Grove Villas, Grovehill Road, Beverley, won the premier place with handsome specimens, well clothed with foliage and carrying good blooms. Mr. G. Coates, gardener to S. L. Haldane, Esq., 114, Coltman Street, Hull, was a good second. In the "cut back" class there were five entries, making an interesting display. Mr. R. Thirsk was again successful, staging capital plants of Vivian Morel, Lady Hanham, and Niveus. Mr. G. Jarvis, gardener to Mrs.

Whittaker, Cliff House, Hessle, second. Trained specimens were numerous. For three, Mr. Henry Thompson, gardener to Mrs. C. J. Ringrose, Cottingham Grange, Hull, was awarded premier honour; Mr. G. Cottam, Cottingham, second. Standards were well represented by the Rundle family. Mr. Thompson secured the leading award with neatly trained plants furnished with small blooms; Mr. W. Mason, gardener to Colonel A. K. Dibb, Kirk Ella, second. "Bush" plants in a strong class, were again well staged by Mr. Goodhill, Mayfield Avenue, Hull, staging popular varieties carrying good blooms; Mr. Mason second.

GROUPS.—For a group of Chrysanthemums, interspersed with foliage plants, arranged for effect in a space of 100 square feet, a Silver Cup and £10 were offered. Three competed, making a magnificent display in the main hall. Mr. V. Waterhouse, gardener to W. T. Owbridge, Esq., Cheney Garth, Cottingham, won the coveted award with an exhibit that left little to be desired. The Chrysanthemum blooms were magnificent, quite equal to the best of those in the cut bloom classes. Henry Weeks, Le Grand Dragon, and M. Chenon de Léché were the most noticeable. Exceptionally fine Crotons, Palms, and small foliage plants were employed with good effect. Perhaps there was a trifle too much cork to be seen on the two mounds in front, and the arrangement at the summit was slightly crowded, otherwise it was a grand exhibit, and quite the best of its kind that we have seen this year. Mr. Jarvis was a good second. The arrangement was quite good, but the Chrysanthemums not being of equal quality to the premier award, the exhibit suffered in consequence. Mr. G. Cottam third.

Four competed in the miscellaneous group class, making a really fine display down the centre of the hall. Mr. C. Tipling, gardener to F. B. Grotrian, Esq., West Hill House, Hessle, won the premier award with an exhibit that left little to be desired. The centre of the group was a magnificent plant, *Phoenix rupicola*. The corners were surmounted with exceedingly fine Crotons on a groundwork of Ferns, Caladiums, &c., the whole being brightened with Orchids, &c., all elegantly arranged; not a semblance of overcrowding was to be seen. Mr. John Foster, jun., Cottingham Road, Newland, Hull, a capital second. In this group Orchids were effectually displayed. Mr. Jarvis third. Prizes are here offered for a decorated drawing-room mirror, with plants of any kind, and a very pretty effect was made by the nine competitors. Mr. G. C. Coates was first prizetaker with an effective arrangement of single-flowered Chrysanthemums at the base, intermixed with Crotons and suitable greenery. The mirror sides were draped with *Carex*, *Asparagus Sprengeri*, &c., Mr. J. Foster, jun., second. Mr. J. Wilson, gardener to B. Mackrill, Esq., Thwaite, Cottingham, third.

CUT BLOOMS.—These were not quite so numerous as in some past years; still, there was sufficient to make a bright display. Amateurs showed up in wonderful form and quantity. Japanese were the more numerous. For twenty-four distinct three competed. Mr. A. J. Dodd, gardener to Mrs. Campion, Frenches, Redhill, Surrey, won the premier position with medium-sized, fresh blooms, of which the following were the most noteworthy: Lord Ludlow, Mrs. Weeks, Mrs. Barkley, M. Louis Remy, Florence Molyneux, Miss A. Byron, and W. R. Church. Mr. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, a close second; Mr. Coates third. In a stiff competition, T. Carrington won for Mr. G. Walker, gardener to C. B. A. Lyon, Esq., The Lair, Hornsea, the premier place for six any one variety. Mr. Wilcocks, gardener to A. S. Wilson, Esq., M.P., Raywell, Cottingham, second with M. Chenon de Léché; Mr. Dodd, with Nellie Pockett, third.

For twenty-four incurved, Mr. Leadbetter, with medium-size fresh examples, won first place. Chrysanthemiste Bruant, Ma Perfection, Yvonne Desblanc, Lady Isabel, Madame Ferlat, C. H. Curtis, Duchess of Fife, and V. Foster were the most conspicuous varieties. Mr. Dodd second with larger but less finished examples; Mr. Jarvis third. Anemone flowered varieties were numerous and good. For twelve Mr. Mason was first, staging well finished examples of Lady Margaret, Jeanne Martz, Mrs. Judge Benedict, and Cincinnati. Mr. Coates second, with Mr. Bearpark, Great Thornton Street, Hull, a close third.

Mr. R. Walker, gardener to Major Stracey Clitherow, Hotham Hall, Brough, had the best reflexed blooms—medium-sized typical examples of the Christine family, &c. Pompon and Anemone Pompons were a strong class. Four entered for twelve bunches, two stems of each, with or without any kind of foliage, staged in cups or vases. Mr. Bearpark won first place with a charming collection; Mr. T. B. Hanson, gardener to W. R. Ringrose-Voase, Esq., Anlaby House, Hull, second; Mr. Coates third. In a similar class for single flowered varieties, Mr. Hanson had the best of eight collections. Mary Anderson, Miss A. Holden, Purity, and Elsie Neville were conspicuous for their good quality. Messrs. Coates and Cottam were second and third respectively. In the district classes the competitors were numerous, and the exhibits of high class. For eighteen incurved Mr. C. Jennings, gardener to F. W. Jameson, Esq., Aston Hall, Ferriby, won the coveted prize—a silver cup—with a capital exhibit, Hanwell Glory, Lady Isabel, Madame Ferlat, V. Foster,

and Topaze Orientale as the most prominent. Mr. C. J. Flower, gardener to R. Hodgson, Esq., Molescroft, Beverley, a close second. For twelve incurved Mr. R. Walker won with neat examples of popular varieties. Mr. Allison second. Mr. H. Thompson won for eighteen Japanese with grand blooms of Graphic, Phœbus, H. Weeks, V. Morel, Lady Ridgway, Florenee Molyneux, and Nellie Pockett. Mr. Wilcocks second. Mr. Thompson also won for twelve Japanese with a similar set.

A class is here provided for Mrs. G. Rundle, G. Glenny, and Mrs. Dixon, six blooms of each, in bunches, and a pleasing exhibit it makes. Mr. Mason, with well-formed small blooms, won the premier award; Mr. Drury, gardener to Mrs. F. V. Moore, Harland Rise, second. Amateurs contributed much to the beauty and interest of the show. For twelve incurved Mr. J. E. Lott, 8, Vancouver Crescent, Alexandra Road, Hull, was premier prizetaker with especially neat blooms of popular varieties. Mr. W. Thompson, 9, Wenlock Street, Hull, won with twelve Japanese in handsome style.

LADIES' CLASSES.—For the best decorated round dessert table, completely laid for six persons, there were seven competitors for the piece of Challenge Plate offered for the premier award. Miss Fanny Kirk, Oustwick Hall, Burstwick, Hull, was distinctly entitled to the first place for an elegant arrangement of Chrysanthemums (Source d'Or), grasses, and Ferns. Miss Kate Ethel Carrick, 291, Beverley Road, Hull, second with an effective arrangement of Mary Anderson Chrysanthemum, quite lightly arranged. Mrs. H. L. Leonard, Ivy House, Preston, Hull, third. For the most tasteful arrangement of flowers, foliage, grasses, or berries on a table space of 3ft each way, there were seven competitors. Miss Ethel G. Fisher, Willerby Hall, Hull, was the most successful, closely followed by Miss B. Kirk. Miss W. Mackrill, The Thwaite, Cottingham, had the best bouquet, winning premier place in that class with a tasteful arrangement. Miss B. Kirk won the premier award for the best decorated epergne for dinner table; Miss Hilda Perdsey, 200, Anlaby Road, Hull, second. A first-class certificate was awarded to Mr. Judson for incurved Chrysanthemum Mrs. F. Judson, which is best described as a white Curtis; and to Mr. W. Wells for Mrs. T. W. Pockett and Henry Barnes.

Liverpool, November 13th and 14th.

It is with extreme gratification that one has to chronicle a show that, for completeness of detail in every way could not be superseded, and judging from the unanimous opinion of experts and visitors, no previous show ever held in Liverpool has given such satisfaction. The handsome St. George's Hall, as viewed from the corridors, was indeed quite transformed, and Mr. J. Pockett, who, with Mr. Wells, of Earlswood, were the honoured visitors for the first time, were not slow to acknowledge that Liverpool is in the forefront in high-class culture.

The great class in the show was for twenty-four incurved and twenty-four Japanese, the winner, Mr. James Heaton, gardener to R. P. Houston, Esq., M.P., The Lawn, Aigburth, distinctly breaking the record by winning the fine Challenge Vase four years in succession, a feat performed by no other exhibitor; consequently the Cup now offered becomes his property. He has thus won the two vases during the afore-mentioned time. The varieties were all leading sorts of the present time, and such as have been enumerated too frequently in the Journal's reports to necessitate repeating. A very fine second was found in Mr. Davies, gardener to E. Ellis, Esq., Deeside, Heswall; while Mr. W. Barber, gardener to W. Holland, Esq., Carnatic Hall, Mossley Hill, and Mr. George Haigh, gardener to Sir W. Tate, Bart., Highfield, Woolton, were third and fourth respectively. Both the classes for eighteen blooms were capitally represented, Mr. C. W. Findlow, gardener to G. E. Moses, Esq., Dulce Domum, Bebington, being victorious with flowers of extra quality. Mr. J. Williams, gardener to C. J. Proctor, Esq., Boscobel Nocotrum, had weighty Japs. For twelve blooms of each section, Messrs. J. Benson, gardener to P. J. Winsor, Esq., Headfield, Bebington, and George Osborne, gardener to Dr. Duffus, West Derby, were well ahead. Mr. E. Bache, Oliva, West Derby, had a grand six Japanese. Mr. J. Caunce had fair blooms of incurved, and twelve handsome bunches of pompons; Mr. J. Armistead, the Anemone class. E. Thirkell, Esq., Formby, a typical amateur, with all new varieties up to date, scored a great success, winning no fewer than three first prizes. The maiden class was easily won by Mr. Dickinson, gardener to H. A. Sanderson, Esq., Aigburth.

Groups improve very much, and, as on former occasions, Mr. Braecgirdle, Elm Hall, Wavertree, paid admirable attention to arrangement, the flowers, too, being of superior quality. A marvellous feature of the show were the superbly grown plants of Begonia Gloire de Lorraine for which a separate class was set apart, Mr. J. Hitchman, Childwall Lodge, winning with dwarf, but handsomely grown plants.

Mr. E. R. Finch, set up a nice collection of Orchids, comprising Cattleyas labiata, autumnalis, Bowringiana, a lovely plant of Vanda cœrulea taking for Mr. Barber the single plant prize. The Chrysanthemum plants were a long way behind the

Manchester ones, but they showed a decided improvement upon former years, Mr. Barber taking the lead for six. The Poinsettias staged by Mr. Lyon, Bolton Hey, Roby, were superior to anything ever seen in Liverpool. Roman Hyacinths, Primulas, Cyclamen, and Mignonette were scarcely up to the usual standard.

Trained plants were, perhaps, about equal to several years past, and it seems somewhat of a reflection when one comes to think of those staged many years ago. The principal prize-winners were Mr. W. Wilson, Mr. J. Harrison, and Mr. Wharton. Bouquets were most effective, Mr. J. Williams being the premier exhibitor.

In Liverpool the fruit classes are looked upon with the greatest favour, and surely never have we had such a display of Grapes, Pears, and Apples, two tables running the whole length of the hall being requisitioned. The Grapes were quite A1. Mr. J. Skitt, out of an enormous competition, literally walked in for six dishes of fruit, two bunches of Muscat of Alexandria, and two bunches of any other white, with magnificent Golden Queen. An old Liverpool committeeman, Mr. J. Barker, who removed with J. K. Raynes, Esq., to Old Colwyn, vanquished all in the Alicante class, and Mr. Ferguson with Barbarossa. The Muscats, in the four-bunch class, staged by Mr. J. Bright, Rawtenstall, being the admiration of every one. Cheshire and Hereford divided equally the Apple classes, Mr. J. Lee and Mr. J. Davies being the victors. Pears were capital, Mr. H. Reynolds and Mr. R. Doe, Knowsley, leading. Grosse Calebasse was the best stewing Pear, from Mr. Ferguson.

The trade exhibits were never so gorgeous. The handsome Apples from Messrs. Dicksons, Ltd., Chester; Cyclamen of the noted Aigburth strain, and winter flowering Begonias raised by Mr. Neal, from Messrs. R. P. Ker and Sons; Lily of the Valley, from Messrs. T. Davies and Co., Wavertree; chaste and costly Orchids from Messrs. J. Cowan, Limited, Gatcacre, and Begonia Gloire de Lorraine, edging a rich bank of Bouvardias from Messrs. Rowlands, West Derby.

Royalty, a new, rich American Carnation, and the much abused Mrs. T. W. Lawson, were really grand, from Mr. C. A. Young, West Derby, and I congratulate myself that my predictions regarding the latter are certainly coming true.

Lastly come Messrs. W. Wells and Co., of Earlswood, with many new varieties raised by Mr. Pockett, Henry Barnes, a gigantic blackish crimson flower, a perfect exhibition flower; Mrs. J. W. Pockett, an exquisite narrow petalled pale primrose; and Mrs. E. Thirkell, a rich drooping yellow, were honoured, and will take high rank. Messrs. Foster, Mercer, and Sadler, in command, did good work.—R. P. R.

Bournemouth Chrysanthemum, November 13th.

Bournemouth can always ensure a thoroughly good show. The society offers handsome prizes to entice Mr. Vallis and such other dons, and so produces a display well worth the visiting. The residents take an active interest in their show too, from the Mayor downward. The venue was shifted to the Volunteer Drill Hall this season, and the change has been everywhere received as a proper step. Mr. James Sponge, of The Gardens, Lindisfarne, acts ably as secretary, while the hon. treasurer is Mr. J. J. Swaffield, Exotic Nursery, Lansdowne. There are classes for pot plants (other than Chrysanthemums), fruit, vegetables, and decorations. The judges were: Plants and cut blooms, Mr. H. Shoesmith, Claremont Nursery, Woking; Mr. N. Molyneux, the Gardens, Rooksbury Park, Fareham. For fruit and vegetables, Mr. W. Ward, the Gardens, Canford Manor; Mr. G. Grigg, the Gardens, Ashburnham Place, Sussex. Honey classes, Mr. Charles Brown and Mr. Frank Harding.

In the first division, with classes open to all England, the first prize here for thirty-six Japs, not more than two of any variety, was captured by Mr. F. S. Vallis. Mr. W. Meredith, gardener to G. Wilder, Esq., Ensworth, formed a very creditable second; while Mr. John Hobbs, gardener to Mrs. E. A. Wood, Hinton House, Christchurch, followed as third. Messrs. Vallis, Meredith, and L. J. Newell were placed for the dozen distinct, and for the twelve distinct incurved blooms, in the same division, first honours were bestowed on Messrs. G. Watts and Sons, of the Palace Nurseries, Bournemouth. Mr. L. J. Newell came second. Mr. George Taylor had the leading half dozen blooms of any one variety (Japs), and also the best six incurved blooms of one sort. Mr. George Barge, gardener to Rev. G. H. Burrows, led in the class for the best illustrative collection of cut blooms, showing the different sections of Chrysanthemums and the variety of form, colour, and size. Table space allowed 5ft by 4ft; second Mr. T. J. Hankinson; third Dr. Eustace, R.N. (John McAnulty), Bournemouth. The chief winners in the second division, which was confined to local growers, were Messrs. W. Palmer, Branksome; G. Robins, Upper Parkstone; L. J. Newell, W. Meredith, J. Hobbs, and W. Preece.

For three bunches of black Grapes Mr. Wm. Mitchell, gardener to J. W. Fleming, Esq., Romsey, beat Mr. John Collins, gardener to Sir John Groves, Weymouth; and third Mr. George Taylor,

gardener to Mrs. Douglas. Mr. Mitchell also led for three bunches of white Grapes. For a collection of eight distinct kinds of vegetables (open division) the same exhibitor (Mr. Mitchell) annexed first honours with a very handsome display.

York, November 13th, 14th, and 15th.

Quite the best show of any of its twenty-two was that held in the Exhibition Building in this city on the above dates under the auspices of the Ancient Society of York Florists. Cut blooms were extraordinarily fine as well as numerous; plants were good; groups of Chrysanthemums, as well as those intermixed with foliage plants were handsome; fruit and vegetables numerous and good, while miscellaneous exhibits were interesting. The arrangements were, as usual, of the best order, under the able superintendence of Mr. G. F. W. Oman, secretary, and a strong committee.

Cut blooms demand a first notice, so fine were they. The principal class was that for eighteen incurved and the same number Japanese. The handsome sum of £10 and the Citizens' Challenge Cup, value £20, is the first prize. For this seven competed, making a very fine display. Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, Surrey, just succeeded in winning the coveted award with handsome blooms of the following varieties:—Japanese: Madame Carnot, M. Louis Remy, Mrs. J. Cleeve, richly coloured; Nellie Pockett, Lord Salisbury, M. Chenon de Léché, G. Carpenter, M. C. Desbrieux, Mrs. C. H. Payne, G. J. Warren, Mrs. Coombes, Mrs. Barkley, and J. R. Upton, very fine. Incurved: Ma Perfection, Mrs. H. J. Jones, Bonnie Dundee, Mrs. W. Egan, D. Foster, Duchess of Fife, C. H. Curtis, Ralph Hatton, Ialene, Hanwell Glory, Frank Hammond, grand; Miss A. Hills, Lady Isabel, and Violet Foster. Mr. J. T. Leadbetter, gardener to A. Wilson, Esq., Tranby Croft, Hull, was an exceedingly close second; Annie C. Love, Ma Perfection, Yvonne Desblanc, Duchess of Fife, Mdle. Lucie Faure, and Charles Longley were his best blooms. Mr. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was third.

The class for eighteen incurved, in not less than twelve varieties, produced keen competition. Mr. Mease again secured the leading award with very fine examples of Miss A. Hills, King of Orange, Frank Hammond, Bonnie Dundee, Ialene, Mrs. C. W. Egan, and Ma Perfection. Mr. Folkard, gardener to Lady Mary Walker, Sand Hutton, York, was a good second. Mr. G. E. Thomas, gardener to the Marquis of Ripon, K.G., third. The last-named won for twelve incurved with a good set. Mr. Cowling, gardener to J. M. Lennard, Esq., Middlesbrough, second. Nine competed in the class for six varieties, making a capital display. Mr. McPherson, gardener to Lord Londesborough, Market Weighton, with magnificent blooms secured the coveted award with Lady Isabel, Duchess of Fife, C. H. Curtis, Hanwell Glory, J. Agate, and Ma Perfection. Mr. G. H. Dobson, gardener to R. Lawson, Esq., Clifton, York, a good second. Madame Ferlat was conspicuous in this stand.

Amongst seven collections of six, any one variety, Topaze Orientale in very fine condition won for Mr. McPherson the premier place. Messrs. Leadbetter and Folkard followed in the order here given with Chrysanthemiste Bruant and C. H. Curtis. Japanese were a strong feature of the show, so numerous and good were they in the classes set apart for this section. For eighteen distinct, Mr. McPherson again occupied the place of honour with heavy blooms of the following:—Mrs. Mease, Pride of Madford, Secretaire Fierens, Phœbus, N.C.S. Jubilee, Pride of Exmouth, Madame Gustave Henry, Lady Ridgway, Lord Ludlow, Madame Carnot, M. Chenon de Léché, and Mrs. A. H. Hall. Mr. D. Williams, gardener to the Earl of Faversham, Duncombe Park, Helmsley, second; Mr. Mease third. For twelve, Mr. R. M. Dewar, gardener to the Hon. Thos. Dundas, Northallerton, was first with a very fine exhibit; Mr. McPherson second. The last-named again followed up his previous success by winning the first prize for six yellow flowered with grand examples of Phœbus. Mr. Murchinson, gardener to F. B. Grotian, Esq., Ingmanthorpe Hall, Weatherley, second, with the same variety. Mr. Williams following with Edith Tabor.

Amongst seven competitors, Mr. McPherson again won for six any white flowered variety with fully developed examples of Madame Carnot; Mr. Williams following with Gustave Henry; Mr. J. D. Hutchinson, Dale End, Kirby Moorside, third, with Mermaid of good quality, with Vivian Morel as fine as it is possible to produce that variety. Mr. Dewar won premier position for six, any one variety, except white. Mr. Folkard, with Mrs. Barkley in superb order, was second; Mr. Williams third with Mrs. Coombes. In the class for golden yellow, Mr. Dewar was an easy first, with Le Grand Dragon in superb condition, Messrs. McPherson and Williams second and third.

Single flowered varieties were admirably staged. Mr. Hutchinson had a grand set, winning premier award with Purity, Edith Pagram, Admiral Sir T. Symonds, Mary Anderson, Rev. R. Remfrey, and Snow Wreath; Mr. A. Shackleton, gardener to the Hon. Cecil Duncombe, The Grange, Lawton, second.

Anemone flowered varieties were not numerous, but good. Mr. J. S. Pink, gardener to J. B. Oldham, Esq., Tollerton, Easingwold, first; Mr. Cowling second.

Chrysanthemums, in sprays undisbudded are always a feature here, this year being no exception, as many as nine competitors staging twelve distinct varieties, three sprays each, making a handsome display. Messrs. Theakstone and Sons, Hull Road, York, won the premier award with charming examples of Pride of the Market, October Yellow, Source d'Or, Melanic Fabre, White Quintus, La Triomphante, and its yellow sport; Mr. G. R. Akester, Driffild, a good second; Mr. Spinks third.

Plants were numerous, and of more than average quality. Handsome prizes are offered for a group of Chrysanthemums interspersed with foliage plants in a space of 100 square feet. Mr. W. Townsend, gardener to E. B. Faber, Esq., M.P., Harrogate, secured the leading award with fairly good Chrysanthemums, exceedingly fine Crotons, Palms, and Acalypha tricolor lightly and effectively arranged; Mr. G. Cottam, Cottingham, Hull, a good second; Mr. J. Snowden, gardener to the Rev. E. Yeates, Heworth, York, third. In the group of Chrysanthemums alone, Mr. J. Hields, Acomb, York, was an easy first prizewinner with exceedingly fine plants, ranging in height from 1ft to 6ft, clothed with handsome foliage, and carrying exceedingly fine blooms; Mr. W. Townsend was a good second; Mr. Spinks third.

In the group of Chrysanthemums set apart for amateurs there was a bright display, Mr. H. Haliwell, Heworth, winning with plants carrying good blooms, while the arrangement could not easily be found fault with. In the specimen plant section there were many creditable examples. Mr. Spinks was successful with four and one Japanese, four pompon flowered, one Anemone, and one single flowered variety, in all cases staging freely flowered examples of well-known varieties. With the incurved section, Mr. E. Everard, gardener to Mrs. Gutch, Holgate Lodge, York, was the most successful prizetaker, with good examples of popular varieties.

Devon and Exeter, November 14th and 15th.

On Thursday and Friday of last week the Victoria Hall, Exeter, was again the scene of the annual Chrysanthemum Show of the Devon and Exeter gardeners. This made the 194th show that has been held by the horticultural society, a record surely, and one that few societies can refer to. Cut blooms were not so numerous on this occasion. Apples, however, were both plentifully shown and of superior quality. The judges for plants and flowers were Messrs. G. Foster (gardener to Mrs. Hamilton Spencer, Teignmouth), and A. Abraham (Lord Clifford, Ugbrooke); fruit: Messrs. D. C. Powdell (Powderham), J. Garland (Broadclyst), and S. Jones (Exeter). Fruit-drying experiments were carried out by Mr. Berry, County Council lecturer. Besides the Chrysanthemums there were classes for the usual seasonal plants from the conservatory, such as Bouvardias, Primulas, and Poinsettias from the warmer houses. Violets were also included, and the indispensable table decorative plants were not forgotten. Groups of Chrysanthemums and plants as trained specimens are more or less features at Exeter. On this occasion some finely grown samples were staged by Lady Duckworth, of Knightleys, and Mr. W. Brock, of Parker's Well. These were first and second respectively for a group of eighteen varieties in pots. Then for a slightly smaller group (fifteen varieties, group of 8ft diameter) Sir Dudley Duckworth-King's gardener, from Weare House, won first; the second prize being annexed by Mr. F. A. Hearne, St. Thomas; and third by Mr. M. Farrant, also from St. Thomas. In the next class for the same amount of varieties grown in 6½in pots, Mr. C. M. Collingwood secured the premier award, and Mr. Brock the second. The latter beat Lady Duckworth for a miscellaneous group.

In the cut bloom classes the principal exhibitors and winners of the honours were Mr. B. H. Hill (Crediton), who was leader for the thirty-six Japs in two dozen varieties. His collection included some splendid blooms of the best new varieties. Mr. F. J. Winnicott (Plymouth) stood second; and Rev. G. Lyon, of Teignmouth, third. Messrs. Hill and Lyon were placed so for the eighteen Japs; while for the distinct twelve the premier award was captured by Mr. W. B. Heberden, with Sir John Shelley second. The show of fruit, as we have already noted, was exceptionally fine. Apples, Grapes, and Pears were shown in quantity, but particularly Apples, which sign is a good one for our southern districts. We noticed the successes of the several gardeners who manage the gardens of such Devon gentlemen as Sir John Shelley, Sir H. Ferguson-Davie, Sir John Kennaway, Sir T. D. Acland, T. Kekewich, Esq., F. Winnifoe, Esq., and others. Lord Poltimore, Lady Duckworth, and Major Tracey were also included. Messrs. R. Veitch and Son, Exeter, showed some beautiful plants. A notable specimen of scarlet-berried Crataegus Lelandi, some pretty Heaths, Japanese Citrons, Carnations, Japanese Winter Cherries, Christmas Roses, and a Begonia—Gloire de Lorraine. Among other honorary exhibitors were the Right Hon. Sir John Kennaway, Bart., M.P., with Apples packed for the market; Mr. S. Sparkes, Uffculme Pears;

Mr. H. King, Exeter, Grapes; and Mr. P. C. M. Veitch, Exeter, fruit and flowers. The arrangements for the show were directed largely by Mr. G. D. Cann, hon. secretary, assisted by Mr. F. W. Parkes and a willing committee.

Edinburgh, November 14th, 15th, and 16th.

The fifteenth annual exhibition of the Scottish Horticultural Association was held in the Waverley Market, and was a distinct success. No society has done more than this for the advancement of Chrysanthemum culture. Over £400 is annually given in prizes. Cut blooms are undoubtedly the principal feature; no less than 4,000 were staged on this occasion. Plants are but moderately shown. The Scottish cultivators have not made the same progress in this phase as they have with cut blooms. Fruit and vegetables are capitally represented here.

The management of this huge concern is entrusted to various committees, all men of experience, who strive to emulate each other in the welfare of the society. Mr. Peter Loney is an efficient secretary, and a worthy successor of Mr. Robert Laird, who did so much in the past to build up this society to its present magnitude.

Cut Blooms.—Cut blooms require a first consideration, so numerous were they, the quality being quite of the best. The principal class was that for twenty varieties, three blooms of each, staged in vases, seven competing for the handsome first prize of £20 and a Gold Medal. Mr. T. Lunt, gardener to Captain Stirling, Keir, Dunblane, was the most successful competitor, with a stand of blooms remarkable for their high quality, the varieties being particularly well chosen, and of the following: Lady Ridgway, Madame Cadbury, Mrs. J. E. Thornycroft, Le Grand Dragon, M. Louis Remy, Mons. Hoste, Mrs. Weeks, Eva Knowles, Australie, Mrs. Barkley, J. E. Clayton, Mrs. J. Bryant, Mr. A. Barrett, Madame P. Rivoire, Mons. Chenon de Léché, H. Weeks, Florence Molyneux, Edwin Molyneux, Nellie Pockett, and Madame de Rosseau. Mr. J. Beisant, gardener to Mrs. Armistead, Castle Huntly, was a good second, staging remarkable blossoms of Madame Cadbury, Florence Molyneux, Mrs. Barkley, J. R. Upton, Scottish Chief, and Pride of Madford. Mr. J. Cumming, gardener to Lady Stewart, Grantully Castle, Aberfeldy, was third.

In the class for fifteen varieties, three of each, arranged in vases, and for which the City of Edinburgh prize, value £20, was offered, there were nine competitors, making a charming display. The premier award was made in favour of Mr. D. Nicol, gardener to J. W. Bell, Esq., Rossie, Forgandenny, for an even exhibit of first class blossoms of the following varieties: Mrs. Greenfield, Nellie Pockett, Mrs. Weeks, Henry Stowe, J. R. Upton, Miss A. Byron, Georgina Pitcher, Florence Molyneux, Mrs. J. Lewis, Mrs. J. Bryant, Mrs. G. Mileham, Madame G. Henry, Australie, Mutual Friend, and Mrs. Barkley. Mr. D. Kidd, gardener to Lord Elphinstone, Carberry Towers, second, with good blooms; Mr. J. Martin, gardener to Mrs. Swinburne, Courdean Hall, Winchcombe, third.

Eight competed for the Scottish Cup and £10, with twelve varieties, three of each. Mr. Lunt was again successful with magnificent examples of Nellie Pockett, Mrs. J. Bryant, E. Molyneux, Madame Cadbury, Australie, and Le Grand Dragon. Mr. Beisant was a close second; Mr. W. Norman, gardener to Earl of Mar and Kellie, Alloa House, third. For four varieties Japanese, three of each, in vases, ten competed. Mr. J. Bouchier, gardener to H. E. Gordon, Esq., Aitkenhead, Cathcart, was the most successful, winning with excellent blooms of H. Weeks, Mrs. Barkley, and Nellie Pockett; Mr. J. Day, gardener to the Earl of Galloway, Galloway House, Dumfries, a really good second; Mr. R. Bruce, gardener to J. Russell, Esq., Seafield, Ardrossan, third.

Mr. W. Lamont, gardener to the Rev. D. Macnair, Brizlee, Collinton Road, was the most successful amongst eleven competitors for six Japanese, any one variety, with charming examples of N.C.S. Jubilee; Mr. McIntyre, The Glen, Innerleithen, second, with Mrs. Barkley; Mr. A. R. Lyon, gardener to Lady Macleod, Shandon, third, with Edith Tabor. For twelve Japanese distinct there was a large entry, Mr. Lunt winning easily with typical examples of popular varieties; Mr. J. H. Cumming second. Twelve competed. For one dozen Japanese, in four varieties, there was brisk competition. Mr. W. Lumley, gardener to the Earl of Elgin, Broomhall, Dunfermline, was first with a worthy exhibit. Incurved varieties are not cultivated in Scotland to any great extent or quality. For twelve distinct, and for six any one variety, Mr. Martin won easily, Mr. J. Shotton doing likewise for six distinct.

Much use is here made of decorative varieties staged in a mass, three distinct, in vases with any foliage, as many as fourteen entering for the prizes. Mr. W. Galloway, gardener to the Earl of Wemyss, Gosford, Longniddry, was the most successful, staging La Triomphante, Source d'Or, and Melanie Fabre in huge pyramids of undisbudded stems. Mr. J. McGregor, gardener to R. H. Elliott, Esq., Clifton Park, Kelso, second. For one vase of single flowered varieties thirteen competed. Mr. A. Angus, gardener to Lord Hamilton, Dalzell, Motherwell,

with a huge mass of Miss Annie Holden, won the premier prize; Mr. J. McKinnon, gardener to R. Anderson, Esq., Eastwood Hill, second with Mary Anderson in superb condition.

Amateurs made a really good display. Mr. R. C. Dickson, School House, Raplock, was the most successful, winning many premier awards.

The premier bloom in the whole show was a fine one of Madame Cadbury, belonging to Mr. Lunt.

PLANTS.—These are not staged very satisfactorily. Too much size of plant is attempted at the expense of quality in the blooms. For six distinct, Mr. W. Pulman, gardener to D. R. W. Hine, Esq., Hollywood, Colinton Road, was first with plants of huge size, carrying a number of small blooms. Mr. Pulman also won for four, and for a single specimen. Plants in 6in pots were quite a feature, so good in quality were they. Mr. O. Cavanagh, gardener to Mrs. J. C. Oliver, St. Edward's, Murrayfield, was first prizetaker.

Mr. W. Wells, Earlswood Nurseries, Reigate, had an interesting collection of new varieties of Chrysanthemums, three of which were certificated as Japanese, viz., Mrs. T. W. Pockett (an exact counterpart of Nellie Pockett, except in colour, which is golden yellow), Henry Barnes (an intensely dark crimson), Edwin Molyneux, and Mrs. Thirkell (bronze yellow).

Messrs. Isaac House and Son, Westbury-on-Trym, staged Violets in quantity and variety.

Messrs. James Cocker and Sons, Aberdeen, had an extensive exhibit of early flowering Chrysanthemums.

Bradford, November 15th and 16th.

The fifteenth exhibition of the above society was held in St. George's Hall on the above dates, and was a great success. Dr. Hy. Smith proved the winner of the Mayor of Bradford's Cup with a fine group of Chrysanthemums. There was a good competition for this class. The second prize was captured by Mr. Wm. Bell, gardener to John Rhodes, Esq., J.P., Bolton Royd, Bradford; and third, W. Greenfield, gardener to D. Hanson, Esq., Shibden, Halifax. The class for a group of miscellaneous plants only brought one competitor, viz., Wm. Bell, gardener to J. Rhodes, Esq., J.P. Specimen plants were a feature of the show. The first prize for six was won by Mr. J. W. Hatton, who showed a particularly clean and good lot, and won the Fattorini Challenge Trophy for the second time. The open competition for the society's ten guinea Challenge Cup (twenty-four Japs, dissimilar) only brought two exhibitors, Mr. E. Ellis, Heswall, Cheshire, being first with superb blooms, closely followed by Mr. J. Collier, gardener to G. Singer, Esq., Counden Court, Coventry. For twenty-four incurved, dissimilar, Mr. E. Ellis was again successful, Messrs. H. Clark and Son, Rodley, being second. The class for twelve Japs brought a good entry, the first prize going to Mr. C. W. Findlow, gardener to G. E. Moses, Esq., Higher Bebbington, Birkenhead, and Mr. E. Ellis second. Lord Masham's Challenge Cup, value ten guineas, was again won by Mr. J. Thornton, Lumb Hall Nurseries.

Bouquets and floral decorations were well competed for, Mr. John Brooke, Mr. W. Brooke, and Mr. S. Dean taking the prizes in the order named. Amateurs were again well to the front. Mr. Thos. Bird, Mr. D. Baker, and Mr. Pemberton were the principal prizetakers. Other successful exhibitors were: Mr. W. Moorby, gardener to H. Mackintosh, Esq.; Mr. F. Howland, gardener to T. Arton, Esq.; Mr. Wm. Banks, gardener to A. S. Haggas, Esq., Oakworth. Certificates of Merit were awarded to Mr. F. C. Edwards, Leeds, for an exhibit of Apples, Onions, and miscellaneous plants; and to Mr. W. J. Godfrey, Exmouth, Devon, for a meritorious exhibit of novelties in Chrysanthemums. The arrangements were well carried out by Mr. Wm. Horsman (chairman), supported by an excellent committee.—H. SPENCER, Hon. Sec.

Cardiff Gardeners' Association.

The fourth meeting of sessions took place on Tuesday, November 12, at the Grand Hotel, Mr. G. Tolman in the chair, when Mr. G. Sharratt, representative of the Newport Gardeners' M.I. Association, delivered a lecture entitled "The Culture of Calanthes." The lecturer treated his subject in a thorough practical manner, giving details regarding composts, insecticides, the best kind of structure to grow them in, ventilation, and condemning the use of the syringe at all times. The strongest point throughout the debate was the best mode of preventing black spot, which so often shows itself so prominently in the leaves, and sometimes in the bulbs. Several expressed different opinions regarding this. The best thanks of the association was accorded Mr. Sharratt for his able lecture, to which this gentleman responded. Mr. G. Shackson was awarded a first class certificate of merit for a fine specimen of Begonia Gloire de Lorraine. The chairman announced that on November 26 Mr. H. R. Farmer would deliver a lecture on "Herbaceous Calceolarias and Cinerarias." This terminated the proceedings.—J. J.



Fruit Forcing.

CUCUMBERS.—The growing of clean straight fruit in winter is an easy matter. There is nothing like plenty of heated surface for growing winter Cucumbers. The heat, not being radiated at a high temperature, is good for vegetation, and the water in the pipes not having to be kept at near boiling point the results are satisfactory in produce and cost of production, for hard firing means a corresponding waste of fuel. Very little air will be needed now, yet a change of atmosphere whenever a favourable opportunity offers will be of great service in hardening the tissues, always, however, excluding cold and sharp air, turning off the top heat when the sun is very bright and likely to raise the temperature much over 85deg or 90deg. In bright weather, damp the house in the morning and afternoon; but be careful not to wet the embryo fruit, for water hanging on it will cause decay. Water will be required at the roots about twice a week, always affording it equal in temperature to that of the bed. Maintain the night temperature at 65deg (60deg on cold mornings, and 70deg in mild weather), 70deg, to 75deg by day, and 85deg to 90deg from sun heat.

The plants from the August sowing planted out in September have covered the trellis, and are fruiting plentifully; but this must be allowed moderately if the plants are expected to afford full supplies at a later period. Young plants, however, always give the best results, hence when they become strong the better plan is to fruit them, and have a succession to follow when they indicate exhaustion. Attend frequently to stopping and thinning, also tying the shoots, avoiding overcrowding, as stout foliage better endures the trying ordeal of wintry weather. Canker must be held in check by quicklime rubbed well into the affected parts. Remove old useless leaves, as this is good for the plants, and keep off attacks of red spider; but the best safeguard for this pest and white fly is a little sulphur on the hot water pipes, also for mildew. Aphides and thrips succumb to fumigation with tobacco paper or vaporisation with nicotine compound, but neither must be excessively used or the foliage will suffer more or less injury; besides, either operation on two or three consecutive evenings in moderation makes sure of the pests.

STRAWBERRIES IN POTS.—A start must be made early in December to have fruit ripe early in March. La Grosse Sucrée has been for many years, and still remains our standard early forcing variety, with some plants of Vicomtesse Hericart de Thury and Royal Sovereign introduced at the same time. The plants have always done best with us in a three-quarter span-roofed house facing south, there being a bed in front for Cucumbers or Melons, a path at the back and a narrow border at the foot of the wall for Tomatoes, now going on towards fruiting in pots in another structure, they being brought into the Strawberry house soon after starting. The Strawberry plants are placed on an improvised stage tier fashion, so as to admit of ready access from the path for watering, and 15in to 18in from the glass. The plants to be introduced should have the drainage seen to, rectifying it if defective, making sure that it is free, removing the loose surface soil, or loosening it if hard, and supplying a top-dressing of horse droppings rubbed through a ½in sieve, adding a good handful of some approved fertiliser to each peck, then watering it with a rose watering pot, so as to bring it into a moist state and consolidate the material, otherwise it washes off in watering the plants. Plants so treated push surface roots freely, and the manurial elements are taken up by them. Wash the pots, remove the decaying leaves only, and place in position, taking care to keep the soil moist, for dry soil causes the loss of roots.—ST. ALBANS.

The Kitchen Garden.

EARLY BROCCOLI.—The early autumn Broccoli now commencing to turn in should not be left too long on the ground. The heads are too valuable to be allowed to spoil by becoming saturated with wet or softened and discoloured by frost. As soon as the heads commence to swell to a fair size lift the plants by the roots with some soil attached, and place them closely together in a shed or deep frame, surrounding the roots with moist soil. The worst of the lower leaves may be removed. If carefully treated in this manner the heads will continue to expand after being taken up. When the heads are cut, of course destroy the stumps and leaves, and clear decaying matter from the others.

ENDIVE AND LETTUCE.—Fully grown plants of both Endive and Lettuce should be lifted and placed in a cold frame

before severe frosts occur. A frame that can be freely ventilated is the best place for them, as they are liable to suffer from damp if this is not frequently attended to. Clear off all yellow and decaying leaves as soon as they appear. Blanch the Endive by tying the tips of leaves together.

GLOBE ARTICHOKE.—The dead, decaying, and useless leaves from round the plants ought to be removed. After this, manure, consisting of a mixture of long and short material, may be heaped round, this serving for the purpose of enriching the roots and affording protection to the crowns during the winter.

POTATOES FOR FRAMES.—Seed Potatoes intended to be used for planting in frames early in the year should now be brought from the store, examined, and all the best tubers placed eye end upwards in shallow boxes, standing them in a cool structure in subdued light, where the sprouts will harden, grow stout, and of a dark purple colour. When the sprouts are about half an inch long the tubers are ready for planting.

POTATOES IN STORE.—It is very desirable that Potatoes in heaps in sheds or cellars should be overhauled in order to pick out decaying or diseased tubers. Attention given to them will be of the utmost benefit, for once fairly clean and sound they keep in good condition so much longer.

CABBAGE.—The advanced rows of plants may have earth drawn to them, while those smaller in size can be hoed between, alike to destroy seedling weeds and to break up the surface for the admittance of air and warmth. If the stock is not large enough, more plants may be placed out. A row or two, according to the demand for Red Cabbage, may be planted of these. If plants are not available a sowing must be made in February.

SEAKALE.—Prepare the strong roots of Seakale for forcing. After lifting, the slender side roots are cut away, only the stout, thick main roots with prominent crowns being utilised for forcing. This preparation enables them to be placed thickly together, working a little soil between them, in boxes or pots, or on the floor of a forcing house. An early batch may be forced by the aid of leaves and manure, packing the material round and over the receptacles containing the roots. Seakale must be forced in absolute darkness. Cover the boxes or pots with others of like size, so that the produce when ready may be conveniently gathered.

Preserve all the superfluous roots as thick as the little finger, cutting them into lengths of 6in, and preserve in sand for forming fresh plantations in spring. Cut the upper ends transversely, and the lower ends slantingly.

RHUBARB.—Placing Rhubarb into a forcing structure need not be undertaken until next month, but the clumps may be lifted out of the ground and left fully exposed, so that the weather can act directly upon them, and cause a complete rest. A good stiff frost will generally ensure this. The roots start away better when placed in heat.

PLANTING RHUBARB.—This is a good season to form a fresh plantation if roots are available to be divided up for the purpose. A large root may be divided at least into four divisions each with several crowns. Plant 3ft apart in very richly prepared ground that has been deeply dug or trenched.—LYMINGTON, HANTS.

Trade Catalogues Received.

Hogg & Robertson, nurserymen, seedsmen, and bulb growers, Dublin.
—*Forest Trees, Conifers, Fruit Trees, Shrubs, Roses, &c.*

J. Backhouse & Son, Ltd., The Nurseries, York.—1, *Select List of Microscopic Fungi*; 2, *Botanical Material*.

PUBLICATIONS RECEIVED.—“Gartenflora,” November. * * “American Agriculturist.” * * “Essex Field Experiments, 1896-1901.” Part 1: On Permanent Pastures. * * “Prospectus of the Winter School of Agriculture, Chelmsford. Session 1901-2.” Course I.: November 25—December 21, 1901. Course II.: December 30, 1901, to February 1, 1902. * * “Select List of Microscopic Fungi” from Messrs. J. Backhouse and Sons, Ltd., York; also “Catalogue of Botanical Material.” * * “The Canadian Horticulturist,” November, 1901. Special features: The Jessica Grape; Wilder Pear; Notes on Summer Pears; The Apple Market. * * “The Best Hardy Perennials for Cut Flowers.” Liverpool: Blake and Mackenzie, School Lane. This book we hope soon to review. “Lilies for English Gardens,” by G. Jekyll, 8s. 6d., net: Geo. Newnes, Ltd. This we will also review. * * “Revue de l'Horticulture Belge et étrangère,” November 1, 1901. Coloured plates of Maranta Lujana and Begonia Double erecta cristata. * * “Le Jardin.” * * “Mechan's Monthly,” coloured plate of Primus verticillatus. * * “American Gardening.”



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matter discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

HARDINESS OF ELÆAGNUS REFLEXA AND BONAPARTEA ROBUSTA (P. A. M.).—*Elæagnus glabra* (reflexa) is an evergreen shrub, with ovate-oblong, acuminate leaves, and bears whitish flowers, sub-solitary in the axils of the leaves in autumn. It grows from 3ft to 6ft in height, and is a native of Japan. In all but cold and high localities it is hardy, and grows freely in any ordinary soil. It should, however, be given a sheltered situation, with a warm south aspect, especially inland. *Bonapartea robusta* requires a greenhouse and preferably a warm one, to thrive satisfactorily, particular care being necessary in watering, especially when at rest.

CANKER IN APPLE TREES (J. T. T.).—It is well to be quite certain that your trees are cankered, for the term is loosely applied. It is now pretty generally known amongst practitioners that canker is caused by a fungoid attack (*Nectria ditissima*). The hyphæ of the fungus may have gone far up and down the wood around the part where the "canker" is concentrated, and to effect a complete cure is difficult or impossible for a long time. You can spray or syringe the affected part with a solution of sulphate of copper (2lb sulphate to every 10lb of water). Spray several times during winter, and thoroughly clean off the worst edges and parts of the cankered gap. Burn these prunings. Pay attention to the condition of the roots, and allow light and air to have full effect on the branches.

DAHLIA BOOK (W. R.).—We will give you full information in a few days.

CREOSOTE ON WOODEN FENCE (B. P. J.).—There is nothing in tar or creosote, when they are thoroughly dried on wooden fences, to harm either the branches or the roots of plants which are trained to such fence. We would prefer to use tar.

TOMATO BLIGHT (W. G.).—There are so many forms of disease termed "blight" that it is impossible, in the absence of specimen, to determine the nature of the disease. It is probably leaf rust, *Cladosporium fulvum*, which produces small brown spots on the young leaves, and gradually increases in size until the greater part of the surface is covered; the leaves gradually become blackish brown, shrivel, and die. The fruiting parts are produced on the under side of the leaves, and correspond with the dark patches, being of a rusty-brown colour. This consists of closely packed, sparingly branched clusters of coloured conidiophores bearing elliptical, one-septate conidia at their tips, and these serve to spread the disease. Spraying with dilute potassium sulphide solution, or with dilute Bordeaux mixture, will check the disease if resorted to sufficiently early and repeated at short intervals, spraying upwards, so as to coat the under side of the foliage with the finest possible film of the solution.

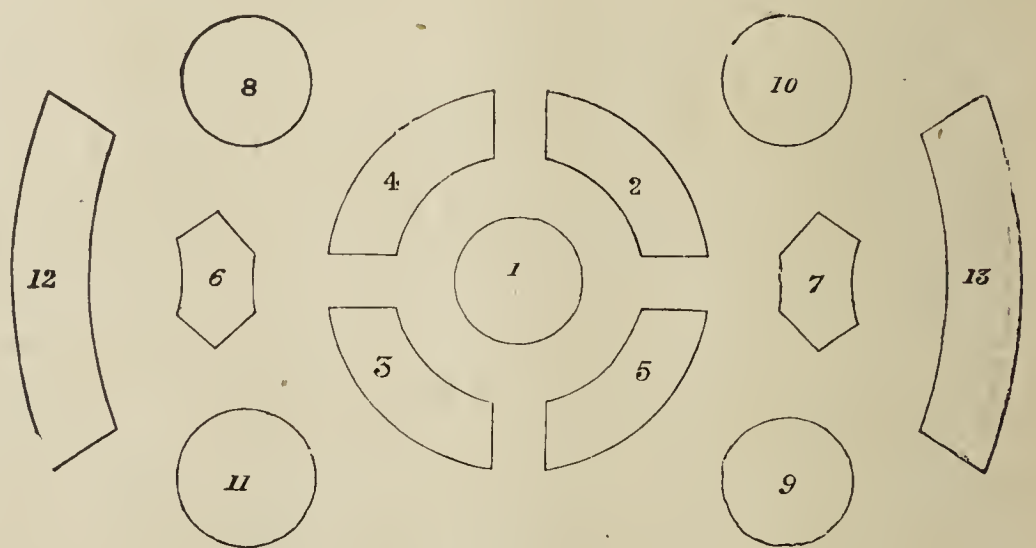
CUTTINGS OF MAGNOLIA GRANDIFLORA (W. W. Berks.).—The practice you propose is one very frequently adopted by all who raise hardy shrubs in any quantity. Cuttings of the half-ripened green shoots, with a heel of older wood attached, may be struck under glass during summer months, and should be grown under protection and well rooted before being planted out. If you have already inserted cuttings, you must just exercise care in not allowing them to damp off. A bottom heat of 60 degrees is sufficient.

BOXES COATED INSIDE WITH GAS TAR (A. H.).—If the tar was allowed to become thoroughly dry, or be absorbed by the wood before soil was put in the boxes, it would not injure the cuttings more than had the boxes been coated with ordinary lead paint. The roots, however, of all plants do not like tar, and we do not see why it was applied to the inside of the boxes. After the boxes have been used some time the tar will wear off; but if the plants will not grow in them satisfactorily you have no remedy but to take the boxes to pieces and have the tar planed off. We think this will be unnecessary, and that you are needlessly alarmed; for what we said of gas tar had no relation to such work as yours. It related to an entirely different subject; but yet no plant will grow well in a tarred tub or box.

DISEASED GRAPES (W. M. C.).—They are "spotted," as gardeners describe ulceration of the berry. As the crop is very heavy, the disease is probably caused by the roots not being able to supply sap sufficient to maintain healthy growth. The berries were too bruised to enable us to identify the variety. The roots are probably outside and too cold.

ALOCASIA METALLICA AND LOWI DRYING OFF—NEPENTHES DISTILLATORIA (A Sunderland Amateur).—The *Alocasias* should have less moisture, less heat, and no more water during winter than is necessary to keep the soil barely moist. The temperature named is quite low enough, a minimum of 65deg being most suitable. The bottom heat is right, but the saucers of water ought to be dispensed with at this season. The soil should not be allowed to become dust dry, nor ought the foliage to be allowed to suffer for want of water. A rest is essential to free growth next season. They should not be dried like *Caladiums*, but still rested by diminishing the atmospheric moisture, heat, and supply of water at the root. They will do under the conditions named in the refuse or tan, preference being given to the former. The *Nepenthes* also should have a rest, and it will do under the same conditions as the *Alocasias* at this season. In winter it should not have so much moisture, nor heat, as when growing.

PLAN FOR A ROSE GARDEN (Enthusiast).—The accompanying plan and the following text (which have been furnished some years ago) appear to meet your needs. The space between the beds should exceed three times their diameter, it being a great mistake to crowd too many Rose beds on a lawn, and to have them of fanciful designs. If the ends of the beds numbered 12 and 13 are scoloped, a round bed placed next, then another



PLAN OF A ROSE GARDEN.

arched oblong, then a round, and so on, the series will look very well. The beds 6 and 7 can be altered in shape according to your taste in the matter; or, indeed, the whole arrangement can be modified to suit the nature of the ground or other circumstances. But why not have an informal Rose-dell, with pergolas leading to it, and clumps of Ramblers, Wincuhianas, and beds of Teas, Chinas, and H.P.'s grouped near by? Such gardens are the most delightful.

REMEDY FOR MEALY BUG ON VINES (W. G.).—The several advertised insecticides are fatal to mealy bug on Vines when applied as a winter dressing, but the difficulty is to reach the insects that have secreted themselves in crevices of the Vines, and even in the woodwork of the house; hence the recurrence of the attack from year to year in consequence of their escaping the dressing. The Vines, after pruning, should have the loose bark removed, taking care not to peel the rods so closely as to damage the young bark, and then wash them thoroughly with tepid water by means of a clean, half-worn paintbrush. The woodwork of the house should be thoroughly cleaned with hot water, softsoap, and a brush, the walls lime-washed, and the loose surface soil of border removed. Then dress the Vines with a mixture formed as follows: Boil $\frac{1}{2}$ lb of strongest shag tobacco for twenty minutes in three quarts of water, and strain. Place in a vessel 1lb flowers of sulphur, 1lb softsoap, and a tablespoonful of spirits of turpentine, and with a little of the tobacco water whilst quite hot. Work the whole into a paste, and when they have been well mixed, pour gradually upon it the remainder of the boiling tobacco water, stirring the while, and then dilute to 2½ gallons with boiling water. The Vines must be painted all over with this mixture when cooled to 130 to 140 degrees, and sufficient care taken to avoid in any way injuring the buds. The border should be given a surface dressing of fresh material. In case the mealy bug appears another season, carefully vaporise the house with nicotine compound, repeating two or three times at intervals of about a week.

PLANTING FLOWER GARDEN (Alpha).—We think your proposed planting will do very well, though it would have been easier done with small beds. The design is pretty, but the fine figures in the centre will be drowned by the large ones round them. We question whether one bed of an octagon shape would not have looked better.

HEATING CAPACITY OF BOILER (R. W., Renfrowshire).—The boiler is a novel one, being a mere tube, 6ft 9in in length and 2ft 6in in diameter, with a flow pipe near one end and a return pipe exactly opposite it at the lower side. It contains the water where the fire or furnace should be, as in the case of the Cornish steam boiler, and even the saddle, indeed every boiler for horticultural purposes worthy of the name. It is a conversion calculated to require a large amount of fuel to heat it, and even then the great body of hot water will be in the boiler instead of in the hot-water pipes. Besides, the return pipe is at the wrong end of the boiler, and on that account likely to interfere with the circulation. Indeed, we quite agree with you in not approving of such a boiler for horticultural purposes, as it would be difficult to heat, therefore burn a large amount of fuel, as well as work badly from the return pipe being at the wrong end of the boiler. Assuming it to be so set that the fire acts directly on the whole of the boiler surface, its heating capacity would not be more than 1,250ft of 4in piping, even when kept perfectly free from soot, &c.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (W. T. G., Oakbank).—Apple: Bess Pool. (Wm. C. & Son).—Pears: 1, Beurré Diel; 2, Marie Louise d'Uccle.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. T.).—Cattleya Eldorado. (M. N.).—1, Thuopsis dolabrata; 2, Picea nobilis; 3, Pinus montana. (A. F.).—We do not name Chrysanthemums. (J.).—1, Solanum Seaforthiana; 2, a piece of finely berried Sea Buckthorn (Hippophaë rhamnoides).

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Covent Garden Market.—November 20th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, ease	24 0	to 30 0
„ dessert	3 0	6 0	Melons, each	0 0	0 0
Bananas	8 0	12 0	Pears, English, ½ sieve	6 0	8 0
Figs, green, doz....	0 0	0 0	Pears, French, crate...	4 0	9 0
Grapes, Alicante, lb....	0 9	1 0	Pines, St. Michael's,		
„ Colman	0 8	1 6	each	2 6	4 6
„ Hamburgh	0 0	0 0	Plums, ½ sieve	0 0	0 0
„ Muscat	1 6	2 6	Walnuts, ½ sieve	2 0	3 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Leeks, bunch	0 1½	to 0 2
„ Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz	1 0	1 3
Batavia, doz.	2 0	0 0	Mushrooms, forced, lb.	10	1 0
Beans, French, per lb.	0 8	0 9	Mustard & Cress, pnnt.	0 2	0 0
Beet, red, doz.	0 6	0 0	Parsley, doz. bnchs ...	2 0	3 0
Brussels Sprouts, ½ sieve	2 0	2 3	Potatoes, English, cwt.	3 0	4 0
Cabbages, tally	1 6	3 0	Radishes, doz.	0 6	0 9
Carrots, doz. bnch. ...	2 0	2 6	Shallots, lb.	0 2	0 3
Cauliflower, tally ...	4 0	6 0	Spinach, bush.	2 0	3 0
Corn Salad, strike ...	1 0	1 3	Tomatoes, English, lb.	0 3	0 4
Cucumbers, doz.	3 0	4 0	„ Canary consigt.	4 0	5 0
Endive, doz.	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8
Horseradish, bunch ...	1 0	0 0			

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Ferns, var, doz.	4 0	to 18 0
Araucaria, doz.	12 0	30 0	Ferns, small, 100... ..	10 0	16 0
Aspidistra, doz.	18 0	36 0	Ficus elastica, doz. ...	9 0	12 0
Chrysanthemums, doz.	6 0	30 0	Foliage plants, var, each	1 0	5 0
Crotons, doz.	18 0	30 0	Lycopodiums, doz. ...	3 0	0 0
Cyclamen, doz.	10 0	12 0	Marguerite Daisy, doz.	6 0	8 0
Dracæna, var., doz. ...	12 0	30 0	Myrtles, doz.	6 0	9 0
Dracæna, viridis, doz.	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
Erica gracilis, doz. ...	10 0	12 0	„ specimens	21 0	63 0
„ caffra, doz.	15 0	18 0	Primulas	3 0	4 0
„ hyemalis	9 0	15 0	Shrubs, in pots	4 0	6 0
„ „ alba... ..	12 0	18 0	Solanums	8 0	10 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	5 0	to 6 0	Lilium l. rubrum	1 6	to 2 0
Asparagus, Fern, bnch.	1 0	2 0	Lilium longiflorum ...	4 0	5 0
Bouvardia, white,			Lily of the Valley, 12		
doz. bunches... ..	4 0	6 0	bnchs	12 0	18 0
Bouvardia, coloured,			Maidenhair Fern, doz.		
doz. bunches... ..	4 0	6 0	bnchs.	4 0	6 0
Camellias, white... ..	3 0	0 0	Marguerites, white,		
Carnations, 12 blooms	1 3	1 9	doz. bnchs.	1 0	2 0
Cattleyas, doz.	8 0	12 0	„ yellow, doz. bnchs.	0 6	1 0
Chrysanthemums,			Odontoglossums	5 0	6 0
specimen blooms,			Primula, double white,		
doz.	1 0	4 0	doz. bunches... ..	5 0	6 0
„ white, doz. bnchs.	4 0	8 0	Roses, Niphetos, white,		
„ coloured, doz. bnchs	3 0	8 0	doz.	1 0	2 0
Cypripediums, doz. ...	3 0	4 0	„ pink, doz.	2 0	4 0
Eucharis, doz.	4 0	5 0	„ yellow, doz. (Perles)	1 6	2 0
Gardenias, doz.	2 6	3 0	„ red, doz.	0 0	0 0
Geranium, scarlet, doz.			Smilax, bnch	1 0	2 0
bnchs.	4 0	5 0	Stephanotis, doz. ...	0 0	0 0
Hyacinth, Roman,			Tuberoses, gross	3 0	4 0
doz. bunches... ..	8 0	9 0	Violets, single, doz ...	1 6	2 6
Lilium lancifolium alb.	2 0	2 6	„ double, doz.	3 0	4 0



Estate Agents and Gardeners.

The positions of the above two classes of men relatively to each other is brought to our notice rather forcibly by a letter signed "Onward," which appeared in last week's Journal. The writer appears to have come to rather strong conclusions as to the iniquity of the present race of agents in their dealings with head gardeners. We can hardly believe that things are as bad as they are painted, and if they are, may it not be a case of error on both sides? If a head gardener undertakes the charge of gardens on the understanding that he is to be responsible to his employer alone, it is surely his own fault if he allows a third person to interfere without immediate remonstrance.

We can entirely sympathise with a gardener who is worried by the constant meddling of a Jack in office such as "Onward" describes; but under such circumstances the question naturally arises, "Is it being done with the knowledge and approval of the employer?" If the answer is "Yes," the gardener must either put up with the annoyance or seek a new situation. But we must say that an employer who allows an expert gardener to be humbugged by an ignorant meddler does not deserve to be well served, and in many of the cases mentioned, or rather hinted at, by "Onward," a little courage and spirit on the part of the gardener would entirely and quickly alter the situation. We are assuming that such cases are numerous, but both hope and believe, from our own experience of agents, that they are in reality both few and far between. "Onward" says, "Owing to agricultural depression there has sprung up during the last twenty years an inferior type of estate agents." There may be more in this sentence than at first meets the eye. An owner of landed property who has been obliged to make the appointment of an agent at a reduced salary one of the items in a general retrenchment, may also have been obliged to deal with the management of the Hall gardens in a similar way, and not only so, but may have an eye to further economies in the same direction. Only those who have had the practical management of estates which have had to be self-supporting during the last twenty years can have any idea of the difficulty and worry of an agent's life. It is too often one never-ending effort to make fifteen shillings go as far as a pound. In some cases, in addition to the control of the estate (farms, wood &c.), he has to partially supervise the household servants at the Hall, and it is not so very surprising that his employer should also require him to accept a watching brief as regards the men in the gardens. It is all a matter of arrangement, and we fail to see why an owner may not have his place managed in his own way. If he allows a valuable servant to be driven away by persecution on the part of a

fellow employé he himself is the greatest sufferer, and if he is kept in ignorance of what is going on he is badly treated.

"Onward" objects to the promotion of office clerks to agents' positions, but agents, like gardeners, must go through a period of training before they are fitted to take full control, and the head of an estate office must be better qualified for his position when he has passed through the routine of it. We know most capable agents who have risen from clerks' positions, and also one of the same description who would be very likely to act in the way complained of. It is not so much the training as the character of the man himself. Tact is the great thing, and, valuable as it is in every walk of life, it is a quality indispensable to the making of a successful agent—a man who has to please, do business with, or control the varied specimens of humanity on a great estate, from my lord or my lady to the humblest workman upon it. Gardeners are not the only people who have grievances against agents, and cases readily recur to us where want of tact, and practically little else, has brought the relations between a landlord and his tenants into such a strained condition that a change in the agency has been the only means of restoring a better feeling. Bad breeding has much to answer for, and it rarely occurs that a gentleman makes an unpopular agent if he possesses the requisite business capacity to make a capable one.

Where the agent is a man of conspicuous ability there is seldom any friction anywhere, as, apart from the tact with which he is plentifully endowed, his very power so impresses and dominates everyone around him that no one dreams of questioning his authority. On large farms the shepherd is often placed in a position which he considers to be a sole charge, and quite independent of the foreman. There is, however, very often great friction between the two, and in a struggle to a finish it is seldom that victory does not rest with the foreman. There is considerable analogy between such cases and those we have been discussing. Agent and head gardener can hardly be entirely independent of each other; but if the conduct of the former is such as to engender distrust and suspicion it is not surprising that the gardener should come to despise him and ignore his authority.

The agent, if he minds his business, will find plenty of employment without interfering with the gardens; and the gardener, if interfered with, will do well to go straight to headquarters and have it out at once. We remember an old story, or rhyme, which this subject has recalled, about a man meeting a bishop on a common, and being asked by his lordship if he ever said his prayers. The rhyme runs—

Well! No, I can't say as I do;
But, Do you know how besoms is made, sir?
Well! No, I can't say that I do.
Then, Every one to his trade, sir!

Work on the Home Farm.

It has been in many ways a wonderful autumn, and the farmer who grumbles about the weather will certainly not do so on the score of its hindrance to farm work. Everything is sown; fallows have been cleaned, and are now being ploughed; Potatoes are all stored, as also are Mangolds, and except for Swede storing. Turnip carting, and grain delivery there will be a restful time for the horses on many farms. Not on all, however; for the occupier of a 300 acre holding close by, on being asked how he would keep his horses exercised, replied that the delivery of Corn and Potatoes to the station four miles away would occupy three waggons five days per week until May 1. Except the ploughing of Turnip land he will require no horses for purposes of cultivation until March, as he has got everything worked up through a liberal use of steam.

We have had a tremendous rain, and water is standing in deep pools in the hollows, especially so in the portion of Turnip fields recently eaten off and not yet ploughed. The farmer who seeks to grow an even sample of Barley, and who takes every care as to the regular disposal of his Turnip and cake troughs, may have all his efforts wasted if the land has not been ploughed previous to a deluge like this, for the surface being trodden hard and level like a floor the rain does not penetrate readily, but accumulates in the hollows and furrows, carrying with it much of the fertilising matter left by the sheep, and causing the production of too much straw in some places and too little in others. It is not always possible to keep the plough at work close up to the Turnip fold, but every effort should be made to do so.

The Turnip folds are very dirty. We always endeavour to consume the strong land roots first, whilst the conditions are good for the lair; but we are caught napping this time, and the

sheep have to go on grass for a day or two. There will be no harm done if the weather will but allow us to finish consuming the field. The root supply is dwindling more quickly than is desirable, and full use will have to be made of all available pasture. The sheep are very healthy, and doing well considering the fact that the roots are of rather poor quality. Losses amongst sheep have been exceedingly small. This must greatly influence both the farmer's pocket and the national supply.

Pork is very dear, as high as 7s. 6d. per 14lb. Fat pigs, especially large ones, are almost unobtainable. Suckers are more plentiful than they were, but keep their price in sympathy with pork. It is a very mean little pig which will not fetch 20s. If there were only more live pigs in the country the farmers could soon alter the price of pork, for sound Potatoes are only making 40s. per ton, and offals are plentiful at 20s.; whilst barleymeal of good quality is only 10d. per stone, and second quality 9d. Good sharps are worth about 9½d., and are the cheapest form of meal in our opinion.

A Land of Sugar and Milk.

The northern coastal districts of New South Wales, watered by the Richmond, Tweed, Clarence, and other rivers, are among the most fertile and picturesque in the Australian Commonwealth, and are continually attracting the attention of agriculturists in all parts of the island-continent, although situated out of the beaten tourist track. But, says a recent visitor, representing a leading Melbourne paper, phenomenal as the rate of agricultural progress has been in the past, it is evident, even to a casual visitor, that only a fringe of the land available and suitable for milking cattle has yet been touched, or brought into condition for grazing stock upon. Up till recently the cleared patches on the northern rivers were devoted to sugar-growing, the cane being purchased by a wealthy Sydney company, having immense crushing mills in the vicinity. On an area of ten acres the sugar-planters could earn a comfortable living—some made fortunes in the early days—but severer competition, and the introduction of beet sugar, have lately caused the cane growers on the Richmond to turn their attention to dairying. "The sugar-growers," we are told, "own small farms, as a rule, from five to fifty acres, perhaps, and generally this area is ample on the banks of the river. The high lands on the Richmond grow sugar-cane to perfection, equally as well as the flats, but on hilly ground the harvesting of the crops is more expensive. The farmers on some of the uplands have, therefore, abandoned sugar-growing for dairying. On the river flats, which are liable to flooding, the sugar crop is by far the safest, and safer than cattle. The swamp lands in general are only suitable for the cane-grower.

"The dairymen chiefly work on the high ground, but the whole of the land is fertile, from the river to the mountain-top, and it only requires to be cleared to make it valuable for dairying purposes. The milk is richer on the hills than that produced on the river flats, and it is also a fact that the cattle are healthier." In the Lismore district there are creameries and butter factories in every direction, several on a most extensive scale. Each of these latter is supplied with about half-a-dozen cream-separating stations, and the aggregate output of butter on the Richmond alone is something enormous. The annual output from the New South Wales Creamery and Butter Company at Lismore is over 1,000 tons, and nearly as much is made at another establishment. Each ton of butter is worth about £80 to the producer, so that the two companies mentioned must be paying upwards of £160,000 per annum to the farmers on the river. The majority of the milking herds are small, varying from ten to twenty-five cows, although a few number about 100 head; so that the money is widely distributed in the Lismore and Tweed districts. There are about 90,000 head of cattle, and it is estimated that fully two-thirds of these are milking stock. Most of the dairy herds were originally formed from station-bred stock, but a number of well-bred sires of the Ayrshire and Jersey breed have lately been introduced with good effect, while choice cows have also been secured from the south coast at various times. Some of the best cows have shown a yield at the rate of 26lb of butter per week, and such animals on the Richmond fetch from £30 to £40. One was recently sold for £51, and twenty cows are common. The business arrangements between the butter factories and the farmers are based on the co-operative principle, although varying in detail.

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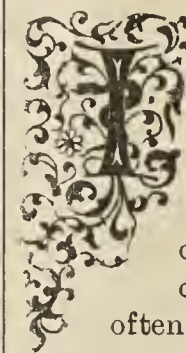
Altrincham & Manchester



Journal of Horticulture

THURSDAY, NOVEMBER 28, 1901.

Styles of Gardening.



It is but natural that opinions should vary on almost every subject, and it is well that it is so, since without difference of opinion there would be no controversy; and as it is by controversy that useful facts are often elicited, I see no reason to fear a provocation of it, if the question at issue is likely to be of interest to those engaged in gardening pursuits. We have been favoured occasionally with various opinions as to the comparative merits of the old and new styles of gardening as regards the planting of flower borders; but mere opinions, unsupported by statistics, do very little towards settling the question either way. What we want is a few old hands to give their experience and their views in a plain practical manner, divested of anything like prejudice, or even sentiment; for it is unquestionable that there is a great deal of the latter quality exhibited in the lucubrations of those who pursue gardening merely as a source of gratification and pleasure.

The only correct estimate, I should think, is arrived at by the thoroughly experienced and practised gardener, who has served his time from his youth upwards, passed through every grade of his profession, and performed his full share of hard work both of hand and head, so that when a piece of workmanship is set before him, he is able to weigh both cause and consequence, and give an opinion at once both correct and impartial. Whether he would say that the old style is better than the new, or the new better than the old, is doubtful; but most probably he would take into consideration the progress of the times, and assert that as nothing in nature or art is stationary, it is little to be regretted that the

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old style of gardening has followed the natural course of things in general, and has passed, or is passing away; and if the new style does not possess such varied or agreeable features, it would be better to modify the old style, and adapt it to the times in which we live, than to indulge in vain regrets that what has passed away apparently possessed greater charms than what we have opportunities of more closely inspecting.

Having from my earliest boyhood been familiar with some of the old-fashioned border plants, and learned very early to distinguish such ones as the Spiderwort, the Catchfly, the Soapwort, the Speedwell, the Livelong, the Bee Larkspur, the Bachelor's Buttons, the Golden Rod, the Starwort, the pretty Sun Rose, the Snapdragon, the Willow Herb, and many similar plants with their true English names, it is but natural that I should preserve some little regard for them. Still, viewing them in their true light as subjects for border planting, it is impossible to be blind to the fact, that among all the old border plants there is not one that I could name that gives the brilliancy of colouring, combined with the dwarf, compact habit, and continuous blooming of the ordinary bedding Geranium—that it would be impossible to find among them plants to supersede the common bedding plants of the day, and obtain from them such brilliant masses of colouring for four or five months continuously.

It is all very well for your sentimentalist to dream of the old-fashioned mixed border, where he might cull his Daffodils in March, his Wallflowers and Cowslips in April and May, his Pinks in June, his Cloves in July, Phloxes in August, perennial Asters in September, and Chrysanthemums in October and November. Certainly there is variety, every object has its peculiar interest. Each month also brings its own peculiar flora, and this to some persons possesses great attraction; but there is not that striking display of "blaze" which the bedding-out system presents. In this latter system the effect is sudden; it breaks full on the eye from the first, but if well managed the eye does not weary, for every bed, or part of a bed, will bear a separate inspection. There is much more in it than the mere gratification of the organs of sight, for the taste of the designer in handling the materials, the quality of the workmanship, &c., may all be discussed, and form as much a subject for comment as a painting or a piece of sculpture.

Now one of the chief objections to the bedding-out system put forward by its opponents is the sense of dreariness that is produced at the close of the year, when the shortening days show their natural effects on the masses of plants, or when an autumn frost changes the whole scene in a single night and necessitates their hasty removal, suddenly converting what were rich beds of flowering plants into a barren waste. I, for one, do not agree that this natural process, which has many analogies, ought to produce any such feeling. No sense of dreariness is produced at the approach of night after enjoying the light of the sun during the allotted time. Neither do we dread the approach of the time of rest after a day of toil. Nor do I see why the falling of the leaf should be suggestive of melancholy thoughts. When the trees have been clothed with verdure their allotted time winter itself comes and changes the whole aspect of nature, and by the contrast we are enabled to see tenfold the beauties that the summer brings forth—not that the winter leaves the garden entirely devoid of attractions. If it has been laid out and furnished with a view to winter as well as summer decoration, the change of seasons merely produces a relief, and leaves no cause for depression.

If we cannot have the gay flower-beds in winter, what can be more really beautiful than the habit and style of growth of many of the Coniferous trees? A judicious planting of these alone will give an interest to any garden. Evergreens of any description will make a garden look lively during the

winter—that is, when they are well arranged; and the arrangement is, perhaps, the main point, for this alone will make all the difference between a mere mass or collection of shrubs and a scene calculated to excite interest. Again: I consider that, supposing the flower-beds to form the principal feature of the garden, and that they are duly proportioned and neatly made either on grass or on gravel, if kept neat and tidy when otherwise bare, there is nothing about them suggestive of barrenness, for they must always be associated with their summer occupants. In fact, an old gardener once told me that it was his decided opinion that at no time of the year did the garden look so well as when put in order for the winter. With the edges trimmed, the beds and borders turned up, the grass and gravel in the best possible order, not even the gaieties of summer made it more attractive. Without going quite so far as that, we may satisfy our minds that each season brings its own peculiar aspects, none of which need be dreary or unattractive, unless we are determined that one or the other shall be so. In this case the fault does not rest with the garden or the season.

Then, again, there are ways and means of clothing the flower-beds with verdure during the winter, and of having spring flowers on the same ground that we expect to have summer and autumn gaiety. The method I have myself adopted has been effectual in securing this object. The process, I believe, is well known among gardeners, and has been objected to on account of the extra time and labour required, and the fact of few being able to appropriate a piece of reserve ground sufficient for the purpose. But as regards the time and labour, these are much less than are required by the bedding plants themselves; and as to the reserve ground, no garden ought to be laid out without some provision of the kind. It is as necessary to the garden as the scullery is to the dwelling-house, and quite as useful in the small garden as the large one. Besides, I happen to think that in gardening, as in other things, for every effect there must be an adequate cause. I would have our flower-beds as attractive in winter and spring as in summer and autumn. The labour and necessary appurtenances must be proportionate. There is this much to be said, however, that plants used for winter and spring decoration must be hardy, consequently they do not require to be protected in expensive structures.

But to the method referred to. Some spring-flowering evergreen herbaceous plants—as the white and yellow Alyssum, Cheiranthus Marshalli, Evergreen Candytuft, and above all Primroses and Polyanthuses—are divided or propagated in August. They establish themselves before winter, and would flower the following spring, but are prevented. They are planted in the reserve ground a foot apart each way; and having one clear season and plenty of room to grow, they make fine large tufts for planting in the following October or November, having been in nursery quarters about fifteen months. When the bedding plants come off, the ground is dug and manured, and these herbaceous plants put in. Being large a few make a good show, and they may be placed 2ft apart, so that a few dozen plants will crop a large space. Gardeners who understand these matters will see that this is very different to putting in little plants that must be set 6in apart to produce any effect. Plants raised in this way will often flower all the winter and most abundantly, even closing together with the quantity of bloom in April and May; after which they may be taken up and kept for stock, the ground being again manured for the summer bedders. It will be necessary to have two stocks of these plants—one for the current year's planting, and one to follow in its place. Cheiranthus Marshalli and Candytuft should be struck from cuttings early in the summer, to be ready to plant out in August. The others may be divided at that time, and planted for good until fit for bedding out. By this process, which I will not deny takes up much time, the flower-borders and beds may be kept gay winter and summer; and those who are in a position to try it, need no longer complain of the dreariness brought on by the loss of the summer flowers.—F. C.

Coniferae.

There are several species and varieties of *Araucaria imbricata*, but the Monkey's Puzzle, as it is called, is the only one sufficiently hardy for the climate of England. It has been known in this country since the end of the last century. In 1795 Captain Vancouver touched at the coast of Chili, and Mr. Menzies, who accompanied the expedition, procured cones, seeds from which he sowed on board ship, and brought home living plants, which he presented to Sir Joseph Banks, who planted one of them in his own garden, and sent the others to Kew. From this circumstance the tree was called at first in England Sir Joseph Banks' Pine. The branches are produced in whorls of six, seven, and sometimes eight, the greatest number being nearest the ground; but these do not indicate the age of the tree, as the number of the whorls do that of the Pines. I have read that to ascertain the age of a growing *Araucaria*, count the tiers of branches, and add one-half of the number, making allowance for the unbranched terminal shoot, if any. This will give nearly the age of the tree. The leaves of the *Araucaria* are quite different to any other Conifer named in these notes. They are ovate-lanceolate, thickened at the base, very stiff, leathery, and sharply pointed, bright green on both sides, and spirally arranged around the branches. This tree retains its leaves for many years.

The *Araucaria*, although rather a formal tree, makes a beautiful specimen, and should be included in all collections of Conifers. It is not particular as to the kind of soil, but it must be well drained, and should be planted in full exposure to sun and air, if in an elevated situation so much the better, a free, open space being more suitable than a confined and sheltered one. On account of its prickly leaves, it is said never to be touched by cattle.

Ginkgo biloba.

The Maidenhair Tree, also known as *Salisburia adiantifolia*, is not so much grown as many of the Conifers, but it is a very distinct and beautiful tree. The leaves resemble in form those of the Maidenhair Fern, being somewhat fan-shaped, green on both sides, and deciduous. It thrives thoroughly well in almost any garden soil in the South of England, but in the North requires the shelter of a wall. In China and Japan it is cultivated for the sake of its fruit, the nuts being much esteemed.

Cephalotaxus Fortunei.

This is a low-growing shrub, attaining a height of from 6 to 8 ft, and, as its name implies, is closely allied to the Yew. There are three or four species, but only this one is known to me. The leaves resemble those of the Yew, but are longer, dark green above, lighter beneath, and sharply pointed. The plant is dioecious. The leaves of the fruit-bearing plant are almost whorled on the primary branches, and many of the latter are erect. In the male plant they are distinctly arranged in two rows like the common Yew, but instead of being flat they are turned upwards. The whole plant is rather lighter in colour than the fertile form. It is a very slow-growing shrub. I do not think it is much grown in this country; it does not lend itself for decorative purposes as do many other of the Coniferae. *Cephalotaxus* is quite hardy. I recently saw a number of plants that had come through the severe winter unharmed. They were growing in a very exposed and cold situation, and had been planted many years, but were only small specimens. It is a native of North China.

Taxus baccata.

This tree, the common Yew, is so well known that very little need be said about it. When standing alone in a suitable situation it makes a beautiful specimen, but it can be employed for a variety of purposes, and pruned into any shape that may be required. There are many varieties. *Aurea* is a form having yellow foliage. *Fastigiata*, the Irish Yew, is a very desirable variety, readily distinguished from the common Yew by its upright mode of growth and deep green leaves, which are not distichously arranged like those of the common form, but are scattered around the branchlets. There is also a yellow form of the Irish Yew, and a variety of the common species bearing bright golden fruit. The Yew is a most interesting tree, and its association with early English history and with religion and places of worship is well known.

Taxus adpressa.

This is termed the Flat-headed Yew on account of its spreading habit and want of a leader. The leaves, which are very dark green and short, are arranged in double rows, slightly inclined upwards and forwards. It is a very slow-growing shrub, and is, I believe, sometimes grafted on stronger growing varieties.

There is one more tree I should like to name, and that is the common Larch, *Larix europæa*. Where there is room this should be included, as it is so distinct from other Conifers, especially in spring, when it breaks into life. The leaves are a beautiful yellowish green tint, which makes it a desirable example to mix with other trees. The red catkins also enhance its charm. It grows best in rather a light loam. I have frequently measured the season's growth on young healthy trees, and have found many that have measured 4 ft.—PINUS.

Pears as Pyramids.

The pyramid possesses these advantages over the bush: the trees occupy less space, they are more handsome, and the fruit gets more sun, which latter means finer specimen fruit and better ripened wood for the next season, as important a factor in determining the fruit crop as the spring frosts. The beauty, too, of pyramid Pears is not to be despised, for taking into consideration their graceful shape, their lovely blossom, the Camellia-like foliage of some sorts, and the charm of the drooping fruit, many worse trees and shrubs might be planted along the edge of the lawn. Where Pears are grown for private consumption only, this system has a great recommendation over that of standard trees, in that half a dozen or more pyramids can be grown in the space which would be occupied by one moderate-sized standard, and although the latter might produce bushels of fruit once in two or three years, all of which must be consumed or disposed of in two or three weeks, a half-dozen pyramids, though never producing so much fruit in a season, nevertheless with proper treatment may be expected to produce some every year, and, in addition to this advantage, they might be of half a dozen different sorts, maturing in as many different months, whose fruit would thus form a more lasting pleasure, and be much more valuable for dessert purposes. In growing for the market, the matter is naturally looked at in a different light.

The varieties of Pears are extremely numerous, perhaps more so than those of any other fruit, a book twenty years old putting the number at upwards of 500, and they have increased considerably since then. Many of these are very delicate, and many have been much improved upon, but if we take the number of desirable varieties as 100, it will still leave us a wide choice. Everyone has his favourite sorts, but there is one very important fact to be borne in mind when choosing Pears, and that is, that all Pears do not thrive on the same soil. Before buying any trees it would be well to visit a few gardens in the neighbourhood, or a nursery, or a market garden, and see which sorts do well. If this were always done, it would save a good many disappointments, for not only are some soils fatal to some Pears—that lovely December Pear, Thompson's, for instance, almost refusing to grow in a soil not rich in lime—but some climates and situations are fatal also. In addition to this, there are some sorts which are almost a failure as pyramids, which do well as dwarf bushes or wall trained espaliers, while others, which make excellent standards, do not make good restricted trees of any sort. The best way would be to make out a list of those Pears which are favourites, with the addition of a few which some catalogue or fruit-growing book makes appear specially desirable, and then, when visiting other gardens in the locality, to eliminate any which are found not to do well. Some catalogues, too, are helpful in pointing out those which are most suitable for growing in pyramidal form.

Another very important thing to be looked to is the stocks on which the trees are worked. Pears grafted on the Quince stock, which is never used for anything but restricted trees, are only suitable for deep or heavy soils, as the Quince, being shallow rooting, suffers very much on a dry, sandy soil, and the trees go back after two or three years. They come into bearing more quickly, and are more fruitful than those on the Pear stock, hence the temptation to get them on the Quince; but this temptation should only be yielded to if the soil is a suitable one for surface rooting trees. On

the other hand, the Pear stock, which is of a deeper rooting nature, is more adapted for light soils, as it is better able to withstand drought. Conversely, it is not advisable to plant dwarf Pears worked on the Pear on heavy soils, as they are apt to make very gross growth, when they will not come into bearing for several years, even a vigorous system of summer pinching failing to bring them into bearing for a couple of years, sometimes even three. In choosing pyramids on the Quince, preference should be given to those worked close to the ground, as the bark of the Quince sometimes splits, causing a check to the tree. If the stock is very short, say 4 in to 6 in, this can be buried wholly in the soil—which should be partially brought about by raising the soil a little just round the stem—when the moisture of the soil will prevent the splitting, and the stock will throw out roots all the way up to the graft, so that the tree will be benefited in two ways—by the absence of splitting, and by a number of young fibres close to the surface.

These two things—soils and stocks—are the two main factors to be considered when choosing Pears for planting, for not only does the relation of the Pear and the stock to the soil have to be considered, but the relation of the Pear to the stock, as certain sorts of Pears will only succeed on a certain stock. The preparation of the soil for planting needs some care. The Pear likes a good, deep loam, inclining to clay, and it is worth while sometimes to improve the soil, so that it is better suited to its tastes. Whatever it is, it must be drained if it is at all water-logged. A dressing of basic slag, at the rate of 20 lb to the 20 square yards, should be deeply dug into the ground to be devoted to Pears, or, if the trees are to be planted in isolated stations, it is well to dig a good-sized hole and put basic slag or wood ashes at the bottom. This will feed the trees, and add to their sturdiness, vigour, and fruitfulness for years to come, whilst the deep moving of the soil, by aiding them in getting a good root-run the first season, will enable them to become more quickly established.

The pruning of the trees requires a considerable amount of attention the first two or three years, so as to secure a well-proportioned tree, with all parts equally strong, and without any congestion of growth. To this end, the straight central shoot which all pyramids should have must be pinched back once or twice during the summer, so as to ensure lateral shoots either the same season or the following one, while the shoot arising from the terminal but as a result of the pinching must be trained up in a straight line with the main stem of the tree. This pinching will also serve to strengthen the lower portion of the tree, which is very essential, as dwarf trees always have a tendency to make vigorous growth at the top, at the expense of the lower part of the tree. For the same reason, if any of the side shoots seem inclined to grow at all rankly, they should be pinched back. If, in the spring, young shoots break out too thickly at any part, they should be thinned by disbudding, removing whole shoots completely. Growth must be so regulated that the sun and air can get to every part of the tree, as there will be no good crops of fruit if the young wood cannot get well ripened by the sun. The trees should have their final pruning the latter part of August, when all young growths should be cut back, so as to make the tree the desired pyramidal shape. If the trees are on rich soil, that is, soil rich in nitrogen, they will make long sapwood growths instead of fruiting, and then summer pinching must be liberally practised, the shoots not required for extension, or to fill up gaps, being pinched back to four eyes as soon as the basal leaves of the shoots are well developed, while the resulting shoots must be pinched back to two eyes or leaves, and so on again if necessary, the original shoots being cut back to two or three eyes at the final pruning the latter part of August. Shoots can often be obtained in a desired position by pinching or cutting back a shoot to a bud pointing in that direction.

Both as to pruning and manuring much will depend upon the soil, and must be left to the discretion of the grower, based upon the knowledge of the needs of the trees which he has acquired by carefully observing them. Pyramid Pears often grow very rankly the first few years, when summer pinching is not only beneficial, but absolutely necessary; but after they have borne one or two heavy crops, a better balanced growth is the result, and then it is well to let most of the shoots grow their full length until the latter part of the summer, as this stimulates root action. We only want to check this vigorous root action when the trees are making too much wood at the expense of the fruit crop.—A. PETTS.

Indoor Fruit Culture.

(Concluded from page 439).

Figs grown under glass, so as to ripen early, are always thought a great deal of, and rightly, for they are delicious fruit. It is difficult to say why so many growers fail with them, for if a few cardinal points are kept in mind, no fruit is more easily grown. One of the most frequent mistakes made in planting Figs is giving them too rich a root run. In consequence, growth is much too free, and at the expense of fruit. The aim of the grower should be to produce a hard, yet vigorous growth, short in the joints, and well ripened by exposure to light and air in autumn. Even with a comparatively poor loam, it will be wise to add about one-third of lime rubbish and broken bricks, and to leave out manures entirely.

After a year or two of growth it is a very easy matter to feed the trees if they need it. With very old established trees, that have got into a fruitful habit, it is different. These may be freely fed with a good chemical manure, or a few inches of farmyard manure may be laid on the border just as the fruit is taking its second swelling. The Fig delights in copious supplies of moisture, and from a mistaken notion that they require dry treatment when in flower, many fine houses of Figs have been ruined. It is not wise, of course, to run to the other extreme, and make the border sodden just at that time, but much of the fruit dropping with which growers are troubled arises, I am convinced, from too little, rather than too much, moisture. The question of stopping Fig shoots is one of the most vexed among fruit growers, some going so far as to say that stopping is unnecessary, others carrying it to the extreme. A middle course is best.

Young trees in the heyday of their vitality must of necessity be pinched; it causes the fruit to push from the leaf axils, and steadies the growth. But one of the finest trees I ever saw was at Livermere Park, Bury St. Edmunds, and Mr. Tollack, who was gardener there at the time, never pinched at all. The growths were laid in moderately thick all over the tree, and bushels of grand fruit were gathered yearly. Had these shoots been pinched, the resulting laterals must have become crowded, so that what is right and proper with the young stock, is, to say the least of it, unnecessary with old established trees that are in a properly balanced condition.

Early and Late Forcing.

For early and late forcing the culture of Figs in pots has much to recommend it. In the small amount of compost contained in a pot, the trees are not so likely to run away into strong unfruitful growth. Again, when one has a few pot trees, it is easy to keep up a long succession of fruit by placing them in other fruit houses at work. The annual routine does not differ materially from that for other descriptions of pot trees, but care is necessary at the annual repotting not to allow a larger size each season, else they soon get unwieldy. Trees forced early will have ripened their wood sufficiently by the middle of August for repotting. The balls may be slightly reduced, and the new soil, consisting largely of a good calcareous loam, substituted. This must be firmly rammed, and the trees, after a few days' nursing, should go outside in the full light until starting time in November.

Respecting the disposition of the growth, always avoid overcrowding, as this is sure to lead to an unfruitful condition. The young shoots should usually be pinched at the fourth or fifth joint, varieties differing a good deal in their freedom or otherwise of pushing fruit. But any trees that stubbornly refuse to fruit may be induced to do so by constantly pinching the points out, as there will be no other outlet for the sap.

Cleanliness is, of course, a very important detail, and feeding at the surface must be practised when the fruit is swelling. To prevent the splitting that some varieties are prone to, it has been the custom to dry the roots, but a far better plan is to make a small notch in the stem immediately behind the fruit, when it is nearly ripe. This will only affect the single specimen, and cannot in any way injure the trees, either at the time or permanently.—H. R. R. (Conclusion of a paper read before the Bristol Gardeners' Association by Mr. W. P. Richards.)

**Angræcum bilobum.**

Herein we have one of the most charming species of *Angræcum*, a genus that furnishes flowers at once exceedingly beautiful and frequently of the strangest form and of great interest. Nearly all of them are natives of Madagascar or the West Coast of Africa, and one or two hail from the Japanese islands. *A. bilobum* is a West African member. It is a very dwarf species, 2in to 6in in height, and has a neat habit. The white flowers (occasionally rose-tinged) are very odorous, and are developed in long racemes as shown in our illustration on this page. *Angræcum bilobum* flowers in autumn, and is decidedly one of the sweetest little Orchids we have. To do it justice, it should be suspended near the glass. As a rule, the flowers last for several weeks.

Sophronitis violacea.

Many who are acquainted with and admire the showy *S. grandiflora* are quite unaware of the beauty of other species in this not every extensive genus. *S. violacea* is not, of course, so showy as the above, but the pretty soft purplish tint of the blossoms make it very attractive when well done. To grow it properly, it needs quite different treatment to others in the genus, and the healthiest lot of plants I ever had were grown not in pots or baskets, but on pieces of Tree Fern stem, suspended from the roof in the cool end of the Cattleya house.

Under this treatment the rhizomes have ample room to extend themselves in every direction. They are not cribbed and confined as they would be within a pot, and every young lead can find a foothold. This, of course, adds materially to the vigour of the plant. If the Fern stems cannot be obtained, then teak blocks, lightly dressed with moss, make a very good substitute. But the natural roughness of the former material, its moisture-holding and long-lasting properties, give it a great advantage over all others. Drying off must never be practised with *S. violacea*. A slight slackening of moisture there must be when growth is least active, but at no time must it be entirely withheld. Should insects attack this species, they must at once be cleared, as such weak growers are soon paralysed by their presence.

Lælia elegans Stelzneriana.

This is a fine variety in the way of *Schilleriana*, but slightly broader in all its parts. The colouring is a bright rose on the sepals and petals, the lip mauve, with a deep purple blotch. *Lælia elegans* is one of the most useful of all autumn flowering Orchids, and more variable than even *Cattleya Mossiæ*. Easily grown, and seldom missing a season in flowering, it should be grown by all orchidists. Fairly large pots, a rough, open compost, and good light are necessary. In summer ample moisture, and in winter only sufficient to prevent shrivelling, is necessary, with a fairly moist atmosphere always. Strictly speaking, it is a bigeneric hybrid, *Lælio-Cattleya*, but the name we use is more familiar.

Dendrobium bigibbum.

Bright and telling in all its forms, this pretty Dendrobe has always been popular. The flowers occur at a dull time, and are plentifully produced. It likes a high and very moist temperature, with ample light reaching it from all sides, and as the roots are

not ambitious in pushing a long way from the growth, small pans suspended near the roof glass, form a convenient mode of culture. Severe, drying, and a low winter temperature is distasteful to this as to all Australian species.—H. R. R.

More About Apples.

Mr. Brotherston is probably correct in saying that horticultural literature is largely composed of reiteration, "repeating ourselves, more frequently repeated by others, or repeat them." There is some consolation, however, that the same reiteration occurs with others as with gardening literature. I do not see how it is possible that it can be otherwise, for in the treatment of the same subject by so many writers, how can extreme originality obtain? Mr. Brotherston, however, may fairly claim to have handled his subject with his usual good and refreshing style, and one would scarcely tire of his communications, where they are evolved out of Apple cultivation, their gathering, and storage.

Though there is no doubt a great loss of fruit from careless gathering, there is an appreciable loss from other causes. The nature of the soil has a deal of influence on the good or indifferent keeping of the fruit, so has district, and the store in which it is kept after being gathered. Then, too, the season has a control over the destinies of the winter fruit store. How can it be otherwise when the soil in which the roots are located becomes as dry as a billiard-table, and almost as hard, and there is neither rain nor water wherewith to moisten it, while the fruit still hangs on the trees? If this was the case in occasional years, so much might not be said or felt, but when these dry seasons become so oft-repeated then the influence of them must be felt in some way, or at some time.

It is really remarkable how trees endure this dry environment without showing distress in the leaves and crops; but here—though there is such an absence of land-moisture—the trees appear in the best of health, and they fruit, freely and regularly too. Our fruit room occupies a distinctly cool aspect, and the internal temperature is uniform; but, despite this there is a great loss of fruit from causes that can only be attributable to climatic conditions.

Nothing less could be expected if the means of gathering such as that complained of by Mr. Brotherston were practised—namely, shaking or knocking off the fruits, and then gathering it from the ground.

Viciousness is not generally an apt illustration of a practice in garden work; but there seems a justification for it when (as Mr. Brotherston says) it comes under his own observation. There are some kinds even with us that will keep well, the latest sorts in particular, but many good early and maincrop varieties do not live out half the time they do elsewhere. It is a bad practice to pull fruits forcibly from the trees; it is better to lose a portion of the crop by falling, than to spoil the whole by too early gathering. It is surprising sometimes to find how long Apples will keep after they have fallen on the soil, even when the skin is somewhat bruised—there cannot be any dependance placed on their keeping when the skin is bruised, but so it happens sometimes, and especially with the hard-skinned late-keeping varieties.

The climate of Scotland is very different from that we are accustomed to in the western counties of England. In some portions of Scotland, at least, the season is a full month later than here, which would materially favour later gathering and longer keeping of the fruit. It is absolutely impossible for me to keep Bramleys or Alfriston into the month of May, whether carefully hand-picked or gathered up in a fallen state. Birds are a terror to the fallen Apple. Unless they are gathered up often, they are quickly sampled by blackbirds and thrushes.



ANGRÆCUM BILOBUM.

Mr. Brotherston has discovered another reason for the shortage in the late winter Apple stocks in the fact that the planting of popular free-fruiting and mid-season sorts has over-ridden the more desirable late keepers. There is a good deal of truth, no doubt, in this opinion, and is a teaching that deserves reiteration. It cannot be expected that mid-season sorts are likely to furnish the table far beyond their own natural time, except in extreme instances. Those circumstanced in having only maincrop and early kinds ought to remedy this forthwith—that is, if late fruit is wanted—and there are not many mansions that can afford to be without a supply extended as late in the spring as it is possible to have them. If rooting up of worthless or aged trees does not come convenient, change them by grafting. This can be so easily done.

For the past ten years I have not missed a season without grafting some trees and planting young ones—not a quantity, of course—but even when there is an extensive list of varieties, and all of them more or less good, I find abundant means and necessity for yet continuing it. There are sorts which, under trial and acquaintance, prove in some degree of lesser value than another. It may be there are too many ripen at one time, fewer at another, some are bad keepers, while the quality of others do not come up to one's standard. Then, again, some are extremely shy of bearing. All these are faults that can be remedied often by re-grafting. This affords, too, the means of catering for certain peculiarities of taste, as Mr. Brotherston puts it, for in the dessert and kitchen Apples there is sure to be good and indifferent reports of varieties as they pass the censorship of employer or cook.

Alfriston, Northern Greening, and Bramley's are thoroughly good and reliable sorts for late use. The latter is a good and regular bearer, and a distinctly heavy fruit. Norfolk Stone Pippin is not a fruit of large size or high quality, but it is one that with us keeps later than any, and never fails to bear a crop, more often a heavy than a light one. This year, famous as it is for its light crops, this variety needed supports under the lower branches. Cockle's Pippin is another that is highly appreciated, as is also Claygate Pearmain. These are good in March. The first-named bears heavily every alternate year, the other gives regular and less heavy crops. Both are deserving of a place in even small collections.

One of the least profitable varieties to us is Emperor Alexander. There are two or three trees of this that, though capable in the matter of size of carrying at best three pecks each of fruit, has not borne one peck during my acquaintance of them. A resolution is now laid down that their heads will be removed, and others put on, during the coming spring. This is an Apple that has had its praises loudly sang in times past, and I am not prepared to say it does not deserve it, for the fruit is handsome, good to eat and to cook, and the tree a healthy grower.

Old trees may be fertile enough, but while one is waiting for age qualifications, material is being lost, and it cannot be said that it is so superior that it is worth waiting a decade—or, it may be, two—without any or but a meagre return. Blenheims are similarly shy in a young state, and instead of planting young trees of this estimable Apple, older ones are headed down and re-grafted. By these means an advance is gained in time and fertility. At the same time, it is inadvisable to allow the planting of orchard trees to lapse because of this failing, for there is no Apple at present to supplant the Blenheim when trees have become matured.—W. STRUGNELL.

Fruit Bottling.

Last Tuesday, in the Drill Hall, Buckingham Gate, Westminster, before the Fellows of the Royal Horticultural Society, a lecture was delivered by Mr. J. E. Austin, of Kingston-on-Thames, on the important subject of preserving fruit and vegetables by the bottling process. We can only afford space for a summary of the lecture. Mr. Austin opened by saying that fruit preserving and fruit production were very closely allied; the success of the one vastly affects the other. The fruit preserver is the link between the fruit grower and the public. The vast quantities consumed make the subject of fruit preservation one of the greatest importance. Fruit is a national necessity in our food supply, and this fact has been recognised by Continental growers, if not by our own countrymen. Growers in these islands labour, of course, under climatic difficulties. Foreigners have their fruit crops ripe from three to five weeks in advance of ours here, and obtain the advantages and high prices of the early markets, and the sharp appetite for the luxury of fresh fruit is reduced before our own fruits are on the markets. So much as 7s. to 10s. per half sieve is obtained by foreigners for early Gages, whereas British growers, coming later, do not realise half these amounts. It is the same with Strawberries, Raspberries, Black Currants, which sometimes fetch fabulous prices. Home growers are hampered by exorbitant railway rates and by the commission agents'

fees; so that, after paying for labour, railway rates, and commissions, the grower frequently has nothing left for himself. How, then, can we wonder if at times he becomes disconsolate, and why need we wonder at young men and women leaving their native villages for town employment?

The remedies proposed have been that the waste land should be cultivated and put under fruit, but this will never occur so long as fruit growing is unprofitable. We require new outlets for our fruit. "Does it not seem remarkable," asked Mr. Austin, "that no attempts have been made to preserve the fruits?" The Americans have taken the matter in hand, and so far they hold a monopoly. All that might be done at home here has not had attention. British fruit has been bottled for years, but in such a way that the samples are neither so good nor so cheap as they ought to be. The new "Vacuum" whole fruit preserving process, however, holds forth hopes for much greater success in future. First results under this system were not satisfactory, and a great deal of time and money were consumed before correct results were obtained. Each kind of fruit is found to have its special characteristics, and to discover these and treat accordingly has been the aim of the patentees of the preserving method just referred to. The advantages claimed are (1) economy in time in the preserving of the fruits; (2), the essence of the fruit is fully maintained, and absolutely nothing is added to give flavour, while the kernel is wholly extracted from stone fruits; (3), the fruits are completely sterilised, and will remain good for several years, and for three or four days when opened out and exposed in warm weather, or for three weeks even in cold winter weather; (4), fruit bottled by the vacuum system remains unaltered during all extremes of temperature. "It is the best method of fruit preserving yet known." From October to June we have hitherto depended almost solely on foreign imports (which amount to millions of pounds sterling per year), but soon we may expect freshly preserved British fruit all the year round. It has been the preserving methods, not the lack of quality in the fruit grown in this country, that has been at fault in the past. British grown fruit is distinctly superior, according to Mr. Austin. The lecturer in time to come hopes to see an export trade in "British fruits," for there is that Greater Britain beyond the seas, where millions of our own countrymen are now settled, and who would gladly pay for the fruits from British orchards. Referring to a conversation he had with a friend from Buenos Ayres, the lecturer said that 25,000 British people were there settled, and yet they could not get British fruits by any means; nothing but Bananas, Pine-apples, &c. They would rejoice to have home-grown Blackberries, Currants, Gooseberries, Green-gages, and the like. Here, then, is the demand, and the case so far stands thus: (1), Good fruit is wanted; also (2), skilful bottlers; and (3), the public must be told of the facts. The first two are in a measure secured, and require expansion; and shortly, we will hope, the public interest may be aroused.

Upon the conclusion of the exposition, Mr. Lewis Castle, superintendent of the Duke of Bedford's Experimental Fruit Farm at Woburn, rose and asked Mr. Austin to explain his (Mr. Austin's) bottling process, for which he had been listening, yet had not been enlightened on. The lecturer candidly replied that he must be excused from divulging what was as yet a trade secret, and known only to three or four persons. In a very short time the method would be public, but his chief purpose in lecturing had been to draw attention to the opening that a sound fruit bottling industry would give to rural labour in this country. Later on he hinted that the Council of the Royal Horticultural Society should take this matter into earnest consideration, in order that it might be advanced. Mr. Joseph Cheal, who occupied the chair, satisfied some inquiries as to how the surplus fruit of small growers could be preserved by describing a plan adopted by his own household, who, he stated, were never without fresh fruit all the year round. The process is simply to place perfectly sound fruit into glass jars or bottles, then place these in an oven for a few minutes till they begin to crack, whence they are immediately taken out, and boiling water is poured in until, when the rubber stopper or lid is tightly screwed on, there is not the least space for any air. The whole secret is in having the bottles entirely freed from air, and afterwards hermetically sealed. No scarred or ruptured fruits should ever be employed; nor should sugar, which causes fermentation. Simply water and tight sealing up.

Death of a Sylvan Monarch.

"Thwaite's Oak," long acknowledged as one of the finest Oaks in Norfolk, was recently sold by auction on Mr. Jonathan Boyce's estate as Tiveshall, where it grew. The fine old Oak realised more than £90, the main trunk, 19ft. long and with an average girth of 21ft., being purchased by a Cambridge firm of church furnishers. The trunk weighed twenty tons, and as it stood half a mile away from the high road, great difficulty was naturally experienced in removing it. The fallen giant, amid much snapping of wire ropes and chains, was rolled down a slope, and a fourteen-horse power engine took a day and a half to drag it over fifty yards to the roadway. The laborious journey of sixty miles to Cambridge was then commenced.



A New Carnation.

Though strictly speaking not a new Carnation, yet the advent of Tree Carnations for winter flowering has taken on apace. The dearth of varieties on this side in this class is a common feature. The one referred to is Belle Silliman, an American Carnation, a fine flower, expanding well, and the calyx tube does not burst, although this may be questioned; yet the percentage of non-bursting blooms is about two per cent. without tube supports, be they ring of rubber, or wire, in colour a white ground, edged a faint carmine.—O'N.

Fibre-yielding Plants.

Experiments are being carried out at the Royal Botanic Gardens in Trinidad with the view of ascertaining the economic value of certain fibre-yielding plants. Fibres prepared from one of these plants (*Wissadula nostrata*) have been sent to Kew for valuation, and experts report that the material closely resembles China jute, and is worth between £15 and £16 per ton. An experimental shipment of fifty tons has been recommended.

Plants for Moist Ground.

The following list of plants are suitable for deep, moist soils:—*Barbarea vulgaris*, *B. v. variegata*, *Juncus maritimus*, *Plantago maritima*, *Lathyrus maritimus*, *Glaux maritima*, *Crithmum minimum*, *Arenaria peploides*, *Triglochin maritimus*, *Cochlearia danica*, *Diotis candidissima*, *Calystegia soldanella*, *Equisetum hymenale*, *E. arvense*, *E. maximum*, *Orchis latifolia*, *O. maculata*, *Listera ovata*, *Lobelia tufa*, *Callas*, *Cordyalis capensis*, *Nepetas*, *Moræa proscideum*, *Polygonum roseum*, *Zygadenus elegans*, *Cardamine bulbifera*, *Diosporum sessile*, *Epipactus palustris*, *Lilium carniolicum*, *Vaccinium Vitis-Idæa* (shrub); *Lilium pardalinum californicum*, *Simethis bicolor*, *Cornus canadensis*, *Selaginella Douglasi*, *Arisarum proscideum*, *Zephyranthes candida*, *Lycopodium obscurum*, *Erythroniums*, *Lysimachias*, *Diosporum lanuginosum*, *Sibthorpia europæa*, *Trillium recurvum*, *T. pendula*, *T. stylosum*, *Selaginella helvetica*, *S. ovatum*, *Pratia angulata*, *Allium narcissiflorum*, *Cardamine pinnata*, *Streptopus roseus*, *Osmunda regalis*, *Gaulophyllum thalictroides*, *Hydrocotylis vulgare*, *Eriphorum vaginatum*, *Hottonia palustris*.

Fig Growing in Smyrna.

In his report on the trade of Smyrna, Mr. Vice-Consul Hampson gives some information as to the cultivation of Figs in Smyrna. He says that the Fig district lies almost entirely along the Smyrna-Ardin Railway, the best quality of fruit called "erbeilli" coming from Inovasi, while those from Nasli and Sultan Hissar are also much valued, though their skins are thicker and lighter. There are two kinds of Figs, both from the same tree: those for eating and those for distilling purposes (hurdas). The fruit of trees growing on the plains is larger and richer in saccharine matter; but, on the other hand, the trees in the plains often suffer from excess of moisture in a wet season, which those on higher ground escape owing to facilities for draining. The trees begin to bear in their sixth year, and are in full vigour in their fifteenth year. The fruit ripens about the middle of August, when it is picked and dried in the open air from three to six days. It is then packed in sacks of about 250lb each, two of which constitute a load for each camel, by which means Figs are carried to the nearest station to be conveyed by train to Caravan Bridge, Smyrna. Thence the sacks are again conveyed by camels to the depôts of the purchasers. An attempt was made to employ carts (arabias) in the place of camels, but it was found that the fruit was damaged if the sacks were piled one on the other. The arrival of the camel load of Figs in Smyrna each season is celebrated as a popular festival, as the washing, drying, and packing of the fruit gives employment to thousands of families. The sale of dried Figs for food takes place from the end of August till the beginning of November, after which the sales are almost entirely of "hurdas" (Figs for distilling). A certain quantity of these latter are also sent to Austria-Hungary, where they are used as a substitute for chicory.

Fertilising Top-dress for Lawns.

Some of the more soluble commercial fertilisers, like nitrate of soda or sulphate of ammonia, and the muriate or the sulphate of potash, say 11lb of the former to 3lb of the latter applied at the rate of 350lb to 450lb per acre, or 50lb to 60lb for the ordinary city or town lot, make a very good dressing for a lawn.

A Yellow Chinese Primrose.

The latest novelty in flowers which are generally grown for greenhouse work (reports "American Gardening") is a yellow form of the double Chinese Primrose, and should prove to be a decided acquisition. It first appeared in France, and is figured in a recent number of the "Revue Horticole" under the name of "Rêve d'Or." The first break appeared in 1899, the flowers being of moderate size, but by careful selection they have been much developed. The flower is really semi-double of rich golden yellow colour, each petal being bordered by white.

Polygonum orientale.

This species flowers with great persistence and freedom, the character of the plant being such as commands attention in even the best collection of hardy herbaceous perennials or annuals. With an abundance of broad and smoothly polished lively-green coloured foliage and graceful shoots, that usually rise 4ft to 5½ft high, terminating in rosy mauve or purple spikes of flowers, which open in August, the plant is very decorative. We may say that as a rule the flowers arch most beautifully, and it is this character that adds so much to the gracefulness and value of the plant for decorative uses. St. John's Staff is a name commonly applied when referring to this subject. It is an East Indian annual, and must be raised from seeds each year. Sow these in March or April, according to the weather, or earlier under glass. Thin out the seedlings and transplant in the open border when the plants are fit and strong.

Blackberries and Wineberries.

The cultivation of Blackberries and Wineberries is not so general as might be, seeing that they are usually certain of bearing. If the former are given good soil to grow in, and plenty of room for training in the long growths, they usually produce in a similar way to Raspberries. The cut-leaved or Parsley-leaved and Wilson, Junr., are the best varieties of Blackberries. Plant 2ft apart in rows 6ft asunder. Sucker growths having plenty of fibrous roots are the best to plant. Cut down closely to the ground the following spring after planting in autumn. The production of strong growths is essential to free fruiting. The Japanese Wineberry is a hardy fruit-bearing shrub, about 4ft or 5ft high. Plant small specimens now in good, rich soil, giving a space of 3ft to each. The fruit is borne on the previous year's growth. After fruiting, these shoots may be cut away, which will leave room for the new to develop. To form fresh plantations, divide the roots in autumn.—E. S.

Jottings on Pines.

Successional plants and other small stock are best grown in span or three-quarter span-roofed pits or small houses, for at this season the plants often suffer irreparable injury from being kept too close and warm, they being drawn and weakly. A temperature of 60 deg at night and 65deg in the daytime will keep all young stock gently progressing, admitting a little air at 65deg at the top of the house, leaving it on all day, but not to lower the temperature below that point; and when the sun raises the temperature to 75 deg a free circulation of air should be allowed. The bottom heat must be kept steady at 80deg. Avoid anything approaching a damp atmosphere, moderate humidity only is needed at this time of year. Apply water when the plants become dry, and then afford a thorough supply of weak liquid manure. It is essential that the plants be kept well up to the glass, and be given plenty of room. Suckers now ready for starting should be kept until March, and if there is likely to be any scarcity of suckers at that time any recently potted may be retained in 5in pots, affording them a light position in a rather moist pit with a temperature of 55deg at night, and a slight bottom heat, keeping them rather dry at the roots. Take every opportunity of collecting leaves whilst dry, Oak and Beech being the best, and whenever a favourable opportunity offers push forward whatever may be necessary in renewing or augmenting the beds, striving to render them permanent, and effecting this without giving a check to the plants.—PRACTICE.

Nepenthes ventricosa.

Though this Philippine species has been grown in the Nepenthes house in the Royal Botanic Gardens, Kew, for a year or two, it was only on October 15, this year, that the Floral Committee of the Royal Horticultural Society had it placed before them. On that occasion it was exhibited by Messrs. J. Veitch and Sons, Limited, Royal Exotic Nursery, Chelsea, and obtained a First-class Certificate. The pitcher is smooth, cream-coloured when in good condition, or dull buff in some instances, with a distinctive, open "mouth," edged with a purplish rim. Our figure shows a pitcher about half the natural size.

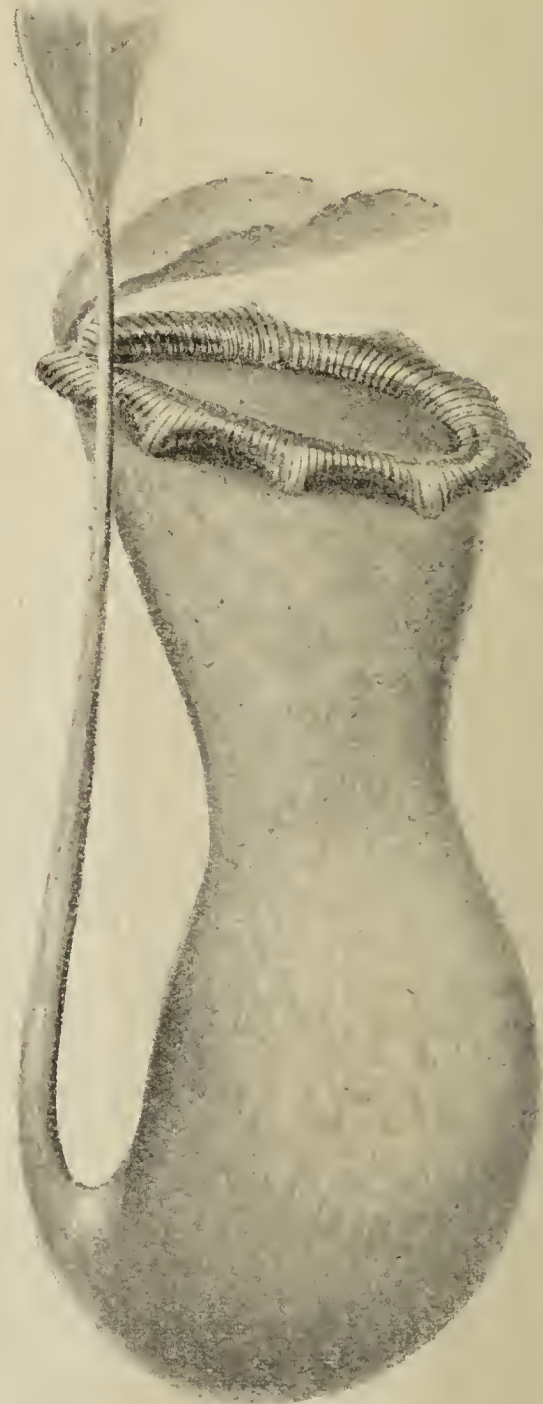
Puck's Posy.

Some time ago I discoursed in these columns upon various plants or flowers which had been associated with the Prince of Darkness, under the title of "Satan's Garland." It has occurred to me to draw together now other flowers which are linked to another mystical or supernatural being, one of whose popular names is Puck. On the whole, our literature about him is in his favour—"the merry sprite of the night" one calls him, a creature belonging to the brotherhood of the fairies. Spiteful things have been said about Puck, it is true, and he has been regarded as an evil spirit; possibly there was a bit of mischief in his character which might be excused. Tradition gives him marvellous powers. He could be visible or invisible as he chose, and diminish his size as he thought fit, so that the bell of a flower would quite conceal him. Indeed, the partiality for flowers shown by the fairies generally is famous, and another thing remarkable is they were supposed to make vegetable objects a ready mode of conveyance, being borne through the air on a nut or a Cabbage stump! People used to speak of "elfin-grey," alluding to the notion that, though the fairies who were abroad by daylight had a green garb, those of the evening or moonlight were attired in greyish brown. They were said to clothe themselves with the Heather or Lichens of the woodland. Other fairies were supposed to lay the wild species of Flax under contribution; some said, that called oddly the "mill-mountain," *Linum catharticum*, had special attractions, and was known as the Fairy Flax. The Foxglove, according to some, supplied gloves, caps, and petticoats. Several of the Bell-flowers served as cradles for the juvenile folk. The Cowslip was particularly favoured, and by putting the ear close to a bank of them people fancied they could hear the low music of the parent fairies lulling their children to sleep. Toadstools also possessed the name of pixy-stools, in some parts of England they were "fairy tables;" these fungi answered both for seats and tables. Pixy was, in fact, but another name for Puck. One soft kind of fungus found about moist woods got the name of "fairy-butter," the fruits of the Mallow became "fairy-cheeses," and in some parts of England farmers left uncleared a few fruit trees for the benefit of Puck and his companions.

Besides plants and shrubs of humbler growth, sundry trees are associated with fairies. The familiar Elm appears to have been one, yet it was often planted near churches. 'Tis true that Witch Elm, or Wych Elm, might seem to imply there was something mystical about one species at least; but there is good proof this name is from an Anglo-Saxon word referring to the flexible nature of the twigs, yet there are districts where this tree had the name of elven, and several authors mention the belief that the Elm was exempt from the peril of being struck by lightning. Another tree of fairy fame was the Alder, also the Oak. Those holes frequently to be seen in old boles and cracks along the bark were said to afford amusement to the fairies, who ran amongst them. Old and twisted Hawthorns had their attractions; and, quitting fairy rings for a time, the elves danced round these, resenting any damage done to the trees by the hand of man. Though good luck was supposed to attend those who, on a May morning, moistened the skin with dew off the Hawthorn, yet this species had a somewhat doubtful repute, and some people excluded its flowers from their houses.

We have noticed the connection between bell-like flowers and fairies in the Cowslip and Foxglove; others are men-

tioned of similar form as being haunted by them. Puck and his comrades had the repute of managing to diminish their size till some such flower could hide them; more than that, these bells of Nature were thought to be melodious under fairy influence. Thus, in Wales, the delicate blossoms of the Wood Sorrel were known as "fairy bells," because the little folk rang out sweet music upon them, which imagination enabled you to hear. Harebells or Campanulas were favoured by Puck, and in Scotland the round-leaved Campanule has borne the name of Witch-bell; yet there are places where one or other of these species is called Lady's Thimble, which may connect it with the Virgin Mary. Anyhow, one odd belief in Scandinavia was that by means of the Campanula the fairies gave people unpleasant dreams; it



NEPENTHES VENTRICOSA (considerably reduced).

was the "bell of the mare"; i.e., nightmare. Then the Bluebell or Vernal Squill had its fairy visitors, it was dedicated, not only to Puck, but St. George. The Henbane, anciently called Henbell, was a flower belonging rather to witches, as an evil plant, than to the fairies. Though regarded by some as a plant dedicated to the May Queen, the common Stitchwort, about the West of England, received the name of Pixy. Children were cautioned not to pluck it, lest if they did the pixies led them away.

During early summer we see upon the corn lands a plant that has long pointed pods, growing in a cluster, the flowers tiny and white, the leaves finely cut, this is *Scandex pecten-Veneris*, popularly Venus' Comb and Shepherd's Needle; but as it is also Fairy Needle it belongs to Puck's posy, and evidently he had a fancy for plants having beaks or sharp-pointed tops, the Geranium tribe being another instance. The Herb Robert of waysides and woods (*G. Robertianum*),

possesses also the name of Puck's Needle. In the olden time this species was gathered when fully out and carefully dried to make herb tea, made into a winter cordial drink. Nor do we wonder that Puck took a fancy to the pretty Wood's Cranesbill of crimson hue, and the meadow species with blue or variegated flowers. In a different tribe of plants, the Horned Poppy of our coats is said to have been the resort of fairies, its long curved pod might furnish Puck with a helmet. It is observable that both fairies and witches were believed to dislike yellow flowers, and to shun places about which they grew plentifully.

Fairies were supposed to visit gardens occasionally, being sensible to the charms of Tulips for one thing. Within these flowers both young and old could hide themselves and sleep, possibly they bedecked themselves with the showy petals. The presence of fairies amongst the Tulip beds tended, so they said, to make the plants thrive, and they sometimes imparted a fragrance to the flowers which was not natural to them. But if a patch of Tulips was removed that the pixies had resorted to, this gave great offence to the fairy folk, who might be expected to destroy any other crop on their ground. Rosemary, a favourite herb with our ancestors, was, it seems, an attraction to Puck and his comrades. People going to cut or pick it were cautioned lest they should unawares injure some fairy lurking amongst the twigs. Elves were supposed to like Strawberries, and feast on them at night; but in our age we should attribute any damage done them to beetles or slugs. The Rev. H. Friend tells us that in North Hants he heard a particular variety of Polyanthus called "Pug-in-a-primmel." Evidently, he adds, "pug" stands for Puck, and "primmel" is just Primrose. Whether Puck has any admiration for the red-topped Tritoma I cannot say, it has been called the Devil's Poker.

Fairies, it has been remarked, disliked yellow flowers generally, but they made some exceptions. We may put into Puck's posy the Elecampane (*Inula helenium*), with large golden flowers, for it was also the Elfwort, and esteemed for its medical nature. Some of the St. John's Worts, especially those occurring in or near woods, I presume were fairy flowers, and reputed to have the power of driving away demons. Then the Globe Flower (*Trollius europæus*), which exhibits its conspicuous blossoms upon moist spots on northern hills, was sacred to the elves, being regarded as a lucky plant, and often woven into wreaths for house adornment. Then the Herb Paris was called by the Swedes Puck's Berry, the leaves, from their figure, typifying fidelity. We add one more species, the familiar Mallow of the hedgerows, which supplied fairy cheeses to Puck and his folk.—J. R. S. C.

The Cherry House.

Where a structure is devoted to the production of Cherries, and the trees are trained to a trellis about a foot from the glass, they must now be pruned. Full-grown trees, properly attended to in stopping during growth, will require very little pruning now. Any summer shoots that have grown considerably should be cut back to about an inch from the base, and the worn-out spurs may be shortened or removed, as required; but cut dead wood and spurs, and thin those where crowded, always reserving sufficient for forming a crop. The terminal shoots in the case of trees extending must not be shortened, but when they reach the extremity of the trellis they will need shortening, always to a wood bud. Young trees will require shortening or cutting back, as necessary, the central shoots being shortened so as to originate others, for filling the space regularly; but it is not advisable to start them too closely together, as that may cause the branches to press against each other, and this is a common cause of gumming. Fan-training is unquestionably the best for Cherries, as it admits of replacing any branch that may fall a prey to disease.

After pruning thoroughly cleanse the house—the wood-work with soapy water and a brush, limewash the walls, use freshly burned lime with a handful of flowers of sulphur to each pailful of limewash, for acting against red spider and the fungoid organisms that produce disease, especially "spot" in Cherries. Wash the trees with soapy water, and afterwards dress them with an insecticide, being careful not

to injure the buds. Remove the loose surface soil from the border and supply fresh loam. The roof-lights being off, they need not be replaced until the time arrives for starting the trees, which, to have ripe Cherries in May, should be at the middle of December. The very early varieties will ripen sooner, such as Early Rivers and Belle d'Orleans, these being well in advance of Black Tartarian and Governor Wood, the quartette being, perhaps, the best of Cherries for forcing on the planted-out system. These divergences in ripening must be borne in mind in forcing Cherries, and it is not advisable to bring them forward too rapidly, especially when forcing them for the first time. Trees under fixed roofs should be well supplied with water if necessary to keep the soil moist. Fixed roofs, however, are great mistakes in the early forcing of Cherries.—G. A.

Winter Washing of Fruit Trees.

A neglected orchard not only harbours all manner of insect enemies during the winter, which come out in the spring and commence their ravages in that particular orchard, but it forms a nursery or breeding ground from which other orchards are supplied with noxious insects. It is desirable, therefore, that all such orchards should be treated in some way to stop the damage that is caused by the various insect pests they encourage. For this purpose a caustic or burning wash known as caustic alkali wash is most successful. This mixture serves a double function. It removes, by means of its caustic properties, all vegetal incumbrances, moss, and lichens; and at the same time it causes all rough and decaying bark to fall off. A tree so treated soon assumes a more healthy appearance. By the removal of the moss and lichen from the trees, the favourite quarters of many hibernating insects are destroyed. The woolly aphis, the Apple blossom weevil, the earwig, the codlin maggot, thrips, and numerous other small insects are found during the winter beneath the vegetal growth and rough bark on fruit trees. The destruction of their winter quarters places these often serious pests at a disadvantage, and they cease to multiply abnormally.

Scale insects, of which two at least are more or less harmful in this country, namely, the Apple bark louse or mussel scale and the brown Currant scale, may also be destroyed by caustic alkali wash. Not only are moss and lichens and the insects referred to above destroyed or stopped from excessive increase by this wash, but it acts also in another way by attacking the eggs of certain species. The extent of its action on the eggs has not, however, been fully determined. Groups of the eggs of the Apple sucker (*Psylla mali*) treated with it were all killed, as also were those of the red spider—a species of *Bryobia*—on fruit, and those of certain aphides. Spraying the wash over eggs recently laid had little effect on them; but, when the embryos were nearly matured, the majority of those of the insects mentioned above were destroyed. At present, therefore, the wash is mainly recommended for cleaning the trees in an orchard and thus destroying the shelter of various insects during the winter, and for killing certain hibernating pests themselves, as the codlin maggot, woolly aphis, and others. It certainly has no effect in the open on the ova of the winter moth, lackey moth, and those of certain plant lice.

Caustic alkali wash has a most beneficial effect on both old and young orchards in which the trees are infested with moss and lichens and with woolly aphis. The best time to spray the trees is about the middle of February, as the eggs of some insects and mites are then more likely to be affected than earlier in the winter, and it is not so late in the season as to harm any developing buds. To prepare caustic alkali wash, first dissolve 1lb of commercial caustic soda in water, then 1lb of crude potash in water. When both have been dissolved mix the two well together, then add $\frac{3}{4}$ lb of agricultural treacle, stir well, and add sufficient water to make up to 10 gallons. As the wash has a burning effect on the hands, care must be taken in employing it. Rubber gloves are sometimes used to protect the hands, but these, unless close fitting, allow the wash to run under the rubber, and more harm is done than usual. With ordinary care the sprayers need suffer little inconvenience.—(Board of Agriculture Leaflet, No. 70; November, 1901.)

NOTES & NOTICES

Royal Appointment.

Messrs. Laing and Mather, of Kelso-on-Tweed, have been appointed Royal seedsmen and nurserymen to His Majesty the King. Since 1894 the firm held a similar warrant from His Majesty when Prince of Wales. The partners of the now combined firms, Mr. Thomas Laing and Mr. R. V. Mather, are most capable business men, with a thorough knowledge of the requirements of their trade in all its departments.

Appointments.

Mr. H. Johns, general foreman, Henbury Hall, and, for over two years previously fruit forcing foreman with Mr. E. Ward, Longford Hall Gardens, Manchester, as head gardener to W. Congreve, Esq., Burton Hall, Neston, near Chester. Mr. D. W. Baker, as head gardener to G. Lawrence, Esq., Crickleaze, Chard, Somerset; formerly gardener to J. Wiblin, Esq., Northleigh, Wimborne, Dorset.

Planting Small Fruits.

In good ground, liberally prepared, there is every prospect of young trees and bushes doing well by planting them now. Choose dry weather for inserting them, as the work can then be more expeditiously carried out, and it is better for the after growth when the roots have a fair start in fairly dry, pulverised, fertile soil. Trampling on wet and pasty ground, which necessarily becomes worse by treading upon it in wet weather, excludes air from the roots, and renders a slow start inevitable. Better delay planting when these conditions prevail, and wait until a more convenient time, in the meantime laying in the roots carefully.—G.

Newport Gardeners' Association.

The following is the syllabus for the session 1901-2. December 11—"The Bougainvillea and its Culture," by Mr. D. Powell. 1902: January 8—"Chemical Manures on Fruit and Vegetables: results of experiments up-to-date," by Mr. F. W. E. Shrivell, F.L.S., Thompson's Farm, Tonbridge, Kent. January 22—"Notes from the Great Fruit Show at the Crystal Palace, October, 1901," by Mr. G. Brooks, of Bristol. February 12—"Fuchsias," by Mr. T. H. Jarvis, chairman. February 26—"The Culture of Melons," by Mr. F. S. Daniels, vice-chairman. March 12—"The Azalea," by Mr. J. Kenward. March 26—"Annuals," by Mr. W. Jones. April 9—"The Anthurium," by Mr. W. E. Lewis. May 14—Consideration of the Outing. June 11—"The Life and Growth of a Plant," by Mr. J. H. Reece. July 9—Open. August 13—Annual meeting; election of officers, &c.

Kew Notes.

Seldom have the Nepenthes been seen in greater vigour, or in a state more profusely pitched, than they are now. One fine plant of *N. coccinea* is bearing thirty-five fine pitchers; *N. Dicksoniana* has sixteen monsters; *Rafflesiana* presents about thirty-eight; *Hookeriana*, thirty-four; and others worthy of special notice are *atro-sanguinea*, *Morgania*, *ampullaris*, *ventricosa* (recently certificated when staged in the Drill Hall by Messrs. Veitch), and lastly *Henryana*. An attractive selection of the mottled-leaved *Sonerilas* are staged at the west end of the stove. The best varieties include *S. Madame E. Walter*, *Madame Secretan*, *Madame Victor Alesch*, *Madame Pynaert*, and *maculata Leopoldi*. The latter is one of the best. *Amasonia calycina*, with its terminal flowers, is beginning to furnish a welcome display; while in the Cape house there is a showy batch of an orange-coloured species of *Jacobinia*, namely, *J. chrysostephana*. The dense flower spikes are borne at the apex of the erect dark stems. The leaves are dark, and more or less shining, broadly elliptical in form. *Hymenocallis moritziana*, with seven beautiful and perfectly white flowers, form a scape that will last some time yet in the freshness of its present elegance. *Clivia Gardeni* is always charming when flowering as it now is. The Orchid range continues to grow brighter. Out of doors the Rose pergolas are being erected, turf is being relaid, and various alterations in the shrubberies are being effected.

Obituary.

On November 21, at Grosvenor Nurseries, Chester, Mr. George McHattie, father of the late Messrs. John and George McHattie, of the well known firm of seedsmen and nurserymen, of Chester, died in his 94th year. His son John was Sheriff of Chester in 1883.

Weather in South Perthshire.

Following three wet and stormy days, frost again set in on the evening of the 21st, and on successive days 8 degrees, 12 degrees, and 14 degrees were recorded. On the afternoon of Saturday thaw began, and continued over Sunday and Monday, which were pleasantly seasonable.—B. D., S. Perthshire.

Corporation as Hop Growers.

The latest municipal enterprise at Tunbridge Wells is the cultivation of Hops by the Corporation, and very successful it has proved. During the summer the Corporation laid out 11½ acres of land for Hop growing on one of its farms. The crop was remarkably good, and has realised £520, or 10s. a pocket more than any other grower in the district has obtained. The profits will be devoted to the reduction of the rates.

Horticultural Lectures at Sherborne.

In connection with the Gloucestershire County Council, two lectures, by Mr. W. Iggulden, F.R.H.S., have been given in the school. They were well attended, and keen interest was taken in the proceedings. The first lecture was on orchard cultivation, and useful, practical hints respecting the planting and treatment of trees were afforded in such a simple way that, although questions were freely invited at any point, but few seemed to think them necessary. The following Monday the lecturer took the culture of bush fruit and vegetables as his subject. This proved more interesting than the previous lecture, and those present showed their interest by frequent and pointed queries, which were promptly and genially answered. The lectures were rendered easily comprehensible by the aid of simple but admirable diagrams. Mr. R. Gray acted as chairman, and at the close proposed a vote of thanks to the lecturer. In the forenoon of the next day Mr. Iggulden, assisted by Messrs. Scott and Barclay, gave, in the presence of a large gathering, practical demonstrations of the planting and pruning of fruit trees and bushes in Mr. Gray's orchard and the adjacent gardens. Those instrumental in providing the above technical instruction doubtless feel gratified at its having proved acceptable.

Will of the late Mr. M. H. Sutton.

Mr. Martin Hope Sutton, of Cintra Lodge, Whitley, Reading, founder of the firm of Sutton and Sons, who retired from the firm in 1888, and died on October 4, in his eighty-seventh year, leaving personal property of the value of £63,888 19s. 8d., the value of the whole of the estate being £91,220 15s. 4d., and his will, dated April 16, 1901, with two codicils, has been proved by his sons, Martin John Sutton, Arthur Warwick Sutton, and Leonard Goodhart Sutton, all of Reading, and Ernest William Sutton, of Basildon. The testator bequeathed £100 to the trustees of the Reading General Charities, £1,000 to the Royal Berkshire Hospital, £200 to the Reading Dispensary, £100 to the Reading Church of England Young Men's Christian Association, £100 to the Reading Town Mission, £100 to the Ventnor Town Mission, £100 to the Young Men's Home, Hazlewood, Ryde, £100 to the London City Mission, £100 to the Seaside Home at Ventnor for London City Missionaries, £500 to the Church Missionary Society, £100 to the London Missionary Society, £100 to the China Inland Mission, £100 to the London Society for Promoting Christianity among the Jews, £500 to the British and Foreign Bible Society, £100 to the Society for Distributing Christian Truth at Eastbourne, £100 to the Irish Church Mission, £100 to the Evangelical Society (Surrey Street, Strand), £100 to the Lord's Day Observation Society, £500 to the Church Pastoral Aid Society, £100 to the Protestant Alliance, £100 to the Commercial Travellers' Christian Association, £100 to the Evangelical Alliance (Adam Street, Strand), £100 to the Soldiers' Home established by the late Mrs. Daniell, £100 to the Convalescent Home (Clevedon, Somerset), and £500 to the George Muller Orphanage (Ashley Down, Bristol). Also £500 for distribution among his male and female servants, and legacies to persons in his employ, and other family bequests. Readers will please note that the above gentleman retired from business in 1888.

Irish Board of Agriculture.

This Board has organised a series of lectures on fruit and vegetable culture, to be illustrated by lantern views. The lectures are being delivered in the country around Dublin.

Decorative Chrysanthemums.

There are a few decorative sorts we would call to notice, and these include Mrs. W. J. Hartin, russety red; Star of Honour; Ella Gang, golden; Red Jane; Crimson Tangle, a splendid crimson flower with golden tips; G. W. Forbes; and M. Jacob Holtzer. The foregoing were noted at Swanley.

Addresses Wanted.

We are without the names and addresses of the secretaries of the following horticultural societies. Any of our readers acquainted with the secretaries of one or other of the societies named, would greatly oblige the Editor of the Horticultural Directory by furnishing him with the names and addresses requested. The societies are: Ebley, Caincross, and Selsby Horticultural; Hornsey Horticultural and Allotments Association; Sherborne Gardeners' Mutual Improvement; West Derby Gardeners' Mutual Improvement Society; Winchester Gardeners' Mutual Improvement Association; Barnsley and District Experimental School of Gardening; The Metropolitan Public Gardens Association; Woking Horticultural Society; Acock's Green Horticultural Society; Swanley Junction and District Horticultural Society.

The Gardeners' Company.

At the Prince's Restaurant, Piccadilly, on Monday, 18th inst., Mr. C. E. Osman, Master of the Worshipful Company of Gardeners, entertained the Lord Mayor, the Sheriffs, and a large company at dinner. Previous to the banquet a court of the company was held, at which Mr. Sheriff Marshall was admitted to the freedom and livery, and constituted a member of the court. Among the guests present were Lieutenant-General Sir William Stirling, Sir Trevor Lawrence (Past Master), Sir Joseph Savory (Past Master), the Rev. W. Wilks (Past Master), Mr. N. Sherwood (Past Master), Mr. P. R. Barr, and many others. Numerous toasts were given. In proposing "The Worshipful Company of Gardeners, may it flourish root and branch for ever," the Lord Mayor referred to the fact that in ancient times the City Guilds had their gardens, and it was in that belonging to the Grocers' Company, of which he was a member, that the Bank of England was first established. He was glad to know that the ancient Company of Gardeners had been resuscitated, and that it was doing its utmost to promote the interests of the fraternity which it represented. The Master responded, and stated that he believed the Company was originally founded in 1145 A.D. The Archdeacon of London responded for "The Visitors," proposed by Mr. Dewar, M.P., and the proceedings concluded.

Variorum.

France has now the deepest well in the world. It is 3,609ft, and the temperature at the bottom is 117 degrees. * * The largest artesian well in the world is 14in in diameter, and 684ft deep. It is at Cerritos, in California. * * A young Apple tree was planted last autumn in the garden occupied by Mr. Dawson, in the Grove Road, Wimborne. It has blossomed on three occasions this year, and as the result of the third display of bloom has a small crop of fruit now. * * Poor Connaught and the poorer parts of Munster, those sections of Ireland where the Celtic race is purest, where a buttermilk, Indian meal, and Potato diet is most prevalent, and population thinnest, are most exempt from cancer. * * There are 62,000 acres of Prune trees in California. Last year they bore nearly 350,000,000lb of green Prunes. Each acre has usually 100 trees. 150,000,000lb were cured last year. * * It will interest arboriculturists in this country to learn that the Michigan Legislature has already appropriated 57,000 acres to the Forestry Commission for experiment purposes. * * The output of Beet sugar in America will be between 80,000 and 100,000 tons, against 35,000 tons last year. Besides, the refineries will handle 100,000 tons of Hawaiian sugarcane. * * Great destruction has been caused amongst the trees in the Moffat district of south-west Scotland by the recent hurricanes. Large numbers of beautiful and majestic trees have perished. As many as eighty tall trees in one small plantation were uprooted. * * Two well-known local growers at Wigtoft made a bet to produce the heaviest twelve dozen of Celery. The winning twelve dozen weighed 8cwt 0qr 10lb, being the heaviest by 1qr 3lb.

Railway Platform Gardens.

The Midland Railway Company's annual award for the best kept and most attractive platform garden on their system is this year divided between Matlock Bath Station (Derbyshire) and Five Ways Station (Birmingham).

Bananas in Queensland.

The area under Bananas in Queensland, Australia, was greater in the past than in the previous year by 413 acres, but the yield was considerably less. The area under this crop in 1900 was 6,215 acres, as against 5,802 acres in 1899, the district showing the principal increase being Cairns, with 652 acres greater area in 1900 than in the previous year. Singularly, this district showed a decrease for 1899 as compared with 1898, so that some additional land must have been put under this crop during 1900, probably new land just cleared, which always yields the best returns under Bananas. The total production in 1900 was 2,321,108 bunches.

Continuation School Gardens in Surrey.

Eight years ago the Surrey County Council established a series of continuation school gardens throughout the county with a view to teaching youths the best methods of cultivation, and inducing them to take practical interest in the work. Mr. J. Wright, F.R.H.S., has just presented an exhaustive report on the work of the past year. He says that it would be difficult to find at home or abroad better tilled and more productive cottage gardens and allotments than are to be found in Surrey. But the advance made by the youths in their gardens has in the aggregate been still greater, and the results have demonstrated that the produce of any kind of land that is at all amenable to improvement can at the least be doubled in value by sound methods of cultivation. This assertion, he says, is substantiated by the actual results obtained in 1,682 plots of land cultivated systematically by youths from fourteen to eighteen years of age, working under instructions during a period of eight years. The value of every crop in these plots has been carefully ascertained and correctly recorded, and from these data it seems absolutely clear that the land has actually doubled in productiveness. The average number of merit marks in the first year of the experiment was forty-five; this year it is ninety, and many of the workers have greatly exceeded this average. The Royal Horticultural Society has awarded one lad, Herbert Cæsar, of Hale, near Farnham, its Silver Banksian Medal in recognition of the best work that has ever been seen in a school garden plot in Surrey or elsewhere, and he is the youngest silver medallist of the society in England. Mr. Wright adds that the money value of the crops on three typical stations, after deducting £40 for manure, seeds, rent, &c., is shown as follows:—At Hale, which is gravel soil, the gain on the outlay in 1894 was at the rate of £14 per acre; this year it is £82. At Englefield Green (sand) there was a loss on outlay in 1895 of £2; this year there is a gain of £76. At Dorking (marl) the gain on outlay in 1895 was £2; this year it is £50. The labour of the youths has not been taken into account in these figures.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. November.										
Sunday ...17	S.E.	deg. 24.8	deg. 24.1	deg. 40.6	deg. 21.8	Ins. —	deg. 38.0	deg. 45.0	deg. 50.0	deg. 13.6
Monday ...18	W.S.W.	40.4	38.2	51.6	23.3	—	37.5	44.2	49.8	19.9
Tuesday ...19	W.S.W.	51.8	48.9	53.1	40.3	—	40.2	43.8	49.2	36.0
Wednesday 20	W.S.W.	52.9	48.8	54.1	50.0	—	43.9	44.6	49.0	45.6
Thursday 21	W.S.W.	50.9	47.9	53.7	47.4	0.06	44.9	45.8	48.8	41.5
Friday ...22	S.W.	43.6	42.7	45.1	42.8	0.12	45.4	46.5	48.8	36.
Saturday 23	N.E.	30.1	29.0	44.0	29.0	—	42.4	46.5	48.8	22.
MEANS ...		42.1	39.9	48.9	36.4	Total 0.18	41.8	45.2	49.2	30.7

A week of dull cold weather, with frost, fog, and a drizzling rain on two days.

Brougham Hall, Westmoreland.

The Northern Seat of Lord Brougham and Vaux.

THE seat of Lord Brougham and Vaux has before been noticed in the pages of the Journal; but that description was of a visit paid in November, when "Winter's dreary reign ruled the mountain and the plain." The article now given describes its glories under the serenity of summer skies in company of a gardener friend, and also a friend of Mr. Taylor's, who has been gardener at Brougham for nine years with great credit. Anything that I will be able to say of his charge will not overrate its excellence.

Historical Notes.

The historical preliminaries I give of Brougham Hall and its surroundings are not a repetition of what has appeared before. The Hall, of which the southern façade is shown on page 491, is built round a quadrangular courtyard. It was partially rebuilt in 1829 and 1840 by the Lord Chancellor Brougham. The entrance hall is a magnificent apartment, with a tessellated paved floor, hung round with suits and demi-suits of armour and implements of war. It is lighted by six windows, filled with richly painted and stained glass, dated from 1492 to 1667. The library, dining, and drawing-rooms are wainscotted with pannelled oak, and have fine ceilings. In the drawing-rooms are fire screens made from the Great Seal Purse of Lord Chancellor Brougham. The walls of the northern corridor are painted in imitation of the Bageux tapestry, and leads to the Norman bedroom. Some of the bedrooms are hung with rich tapestry, and others have their walls covered with beautifully coloured leather, which is also embossed and gilded. St. Wilfrid's Chapel, close to the Hall, is splendidly fitted up in cathedral style, with stalls and open seats richly carved, the redos of oak, gilt, with a splendid altar piece of the fifteenth century, and has carvings of the Saviour bearing the cross before the crucifixion. At the west end is an elaborate parclose screen, behind which is the organ. The roof is of oak, divided with fifty-four panels, each containing a shield of arms or crest richly emblazoned.

The ruins of Brougham Castle are close to the park, and belong to Lord Brougham. It stands on an elevated plateau on the south bank of the River Eamont, and just below its junction with the Lowther. This castle of which I write was anciently one of the strongest of Border fortresses, and is celebrated in verse by Wordsworth on the restoration to his estates and honours of the good Lord Clifford, "the shepherd Lord." The Keep, the most ancient part, was built by Robert de Vipont in the early part of the thirteenth century; it is 44ft square, with walls 11ft in thickness. The gatehouse, a great rectangular structure 90ft by 40ft, was erected by Roger de Clifford, who, in 1268, married Isabel, daughter and co-heir of Robert de Vipont. The castle was restored in the Stuart period by Anne, only surviving daughter and (sole) heiress of George Clifford, third Earl of Cumberland, and wife successively of Richard Sackville, second Earl of Dorset, and of Philip fourth Earl of Pembroke and Montgomery; she was in many ways a remarkable woman.

The Flower Garden.

Coming now to the garden, we find the flower gardens on the south side of the house (partly shown in the illustration). The hall on this side is clothed with Ampelopsis and Vitis Coignetiae, which in the autumn must have a glowing effect. On each side of an ancient sundial are twelve circular beds edged with stone, and terminated at the extreme ends with an oblong bed. The sundial is dated 1660, and the motto runs:—

"OH WRETCHED MAN REMEMBER THOU MUST DIE."

At the eastern end is a fountain, in the basin of which are six Nymphaeas in tubs (Marliac's hybrids). Those noted in

flower were *N. chromatella*, *N. Laydekeri*, *N. rosea*, and *N. Marliacea alba*. There are also large beds of Dahlias, intermingled with Eucalyptus, Hollyhocks, *Solanum marginatum*, and the Fish-bone Thistle, *Cnicus* (*Chamaepeuce*) *Casabonæ*. In front there is a Clematis-covered wall, with four large oblong beds and four small circular beds placed alternately in front of it. Bedding is done almost entirely with one kind of plant in a bed, without either dot plants or edgings. The bedding plants noticed were Begonia Fairy Queen, tuberous Begonias, Heliotrope Edenhall Blue, blue Lobelia, *Calceolaria amplexicaulis* (staked), *Lobelia fulgens* Queen Victoria, Zonal Pelargonium Harry Hieover, Ageratum, and Phlox Drummondii was particularly good. In the herbaceous borders around the kitchen gardens Salpiglossis were very fine, and Tropæolums (*Nasturtiums*), both major and the Tom Thumb varieties, added a splendid stretch of warm colouring. Sweet Peas are largely grown, and *Inula grandiflora* in numerous clumps is used in brown bowls in the rooms. Border Carnations in thousands were very fine, the favourites being Raby Castle, Duchess of Fife, and a seedling of Mr. Taylor's named Lady Brougham, maroon pink; also a seedling from Llangedwyn in North Wales named Lady Williams Wynn, this being bright red. Picotees are also grown in quantity, and many good ones were in bloom. *Physalis Franchetti* was very robust, and forming its lantern-like orange-red fruits. It is regularly transplanted at Brougham.

Edible Crops.

The kitchen garden crops, Peas, Celery, Beet, Chinese Artichokes, and other crops were good, and bespoke proper culture. Apples were fairly abundant on walls, and on espaliers, and bush trees. Apricots yielded a fair crop on a south wall, and Morello Cherries on a north wall. Violets Princess of Wales and Marie Louise were mulched with short manure. Malmaison Carnations had been layered, and very strong and healthy the layers were; about seven hundred Malmaisons are grown here. Over six hundred Chrysanthemums are grown, and the strength, vigour, and matured solidity of the Brougham plants could hardly be equalled; they are grown exclusively for home decoration, three blooms per plant. Coming to the fruit houses, the early vinery had had its crop cut; but in the succeeding one were some magnificent bunches of Black Alicante averaging from 2½lb to 3lb, perfectly finished. The Muscat vinery showed Muscat of Alexandria fine in bunch and berry, but not as yet quite finished. The Palm house, a lean-to of considerable width, and about 80ft long, was full of small healthy Palms, and on the front stage (with open ventilators) were cool Orchids from end to end. These were mostly *Odontoglossums*, and with them were thriving *Sarracenias* in quantity, and some plants of *Disa grandiflora*, which were doing well. The early Peach house had been gathered, and underneath the trees some very healthy *Clivias* were noticed, numbering about thirty or forty in large pots. Two new houses, three-quarter span-roofed houses, each 40ft long, were full of very healthy plants, one containing Melons, each plant bearing three or four good fruits. Cucumbers were in the next compartment, and on a shelf close to the glass were young *Codiaeums* (*Crotons*), and about three dozen specimens of *Begonia Gloire de Lorraine* in 6in pots. In a late Peach house a good crop of fruits were swelling-up, and at one end of this house about fifty plants of the Tree Carnation *Mdlle. Thérèse Franco*, each plant bearing many flowers of that inimitable pale pink shade. Many two-year-old plants of Malmaison Carnations were still in flower in a greenhouse; the stages of this span-roofed house being prettily draped with *Fragaria indica*, bearing ripe fruits.

A range of span-roofed plant houses in four divisions was

next entered. In the first house some forty or more plants in 5in pots of *Hydrangea Otaska monstrosa*, with trusses of 12in and 14in in diameter, were especially fine, and much admired. In the next house sixty healthy *Gardenias* in 7in pots were on view, and from the roof suspended the lovely *Gloriosa superba* in flower. Again in the next division were a couple of dozen plants of *Cymbidium Lowianum* that attracted attention from their vigour; also *Cypripedium Harrisianum* superbly finely flowering. Amongst *Cypripediums* were *C. callosum coloratum*, *C. grande*, and *C. Sedeni*; together with *Oncidium ampliatum*. A dozen plants on blocks of *Cattleya citrina*, suspended from the roof, were in glowing health, and some three or four plants were flowering, one of which had three exquisite yellow flowers. In the next division, such favourites as *Cattleya labiata autumnalis*, *C. Harrisoniæ*, and *Lælia harpophylla* were in first rate health.

pointed out. Mr. Taylor has a stock of one hundred and fifty plants of this *Calla*, most of which are flowering corms, which stock was raised from two plants.—F. STREET.

Chrysanthemum Groups.

Finishing Off the Base.

In the arrangement of Chrysanthemum groups of flowering plants it is obvious that, if the plants employed are at all tall in growth, material of some kind must be used to finish off the base. Decorative foliage plants and Ferns arranged judiciously will make the finish as well as anything, and to a great extent hide the stems. I have seen groups finished off with nothing but a banked-up heap of sphagnum moss. Should the plants be very tall, and have



Brougham Hall, Westmoreland.

The span-roofed stove (140ft long) has recently been heightened and re-roofed. It is most delightfully arranged, the six arches spanning the pathway being clothed with *Thunbergia alata*, *Begonia President Carnot*, and *Phyllanthus nivosus*. A fine collection of *Caladiums* are in this house, some of the best varieties being included and grown well, both as large and small plants. *Andropogon Schœnanthus* (Lemon Grass) was represented by a score of plants, and fine decorative stock they make. Handsome leaved *Anthuriums*, along with *Acalypha musaica*, *A. marginata*, and *Panax Victoriæ* call for special notice, as also many fine plants of *Dracena Baptisti*, *D. hybrida*, and *Acalypha hispida*. The stages were draped with *Panicum variegatum*, and suspended from the roof were quantities of *Dendrobium Phalænopsis Schröderianum*, *Calanthe Sandhurstiana*, and *C. William Murray* all making free and robust growth. In a cool house under the stages, *Calla Elliotiana* in a dormant state was

had the misfortune to lose a large proportion of the lower leaves, the moss fails to hide the stems for their complete length.

In a group I once saw the centre was a forest of bare stems, sticks, and pot rims. If the heaped-up bank of moss in the front had been distributed over the whole surface of the pots a much better effect would have been obtained. This might have been enhanced by a score of dwarf foliage plants arranged round the base with their pots buried in the moss. With a plentiful supply, however, of suitable decorative foliage plants and Ferns the aid of moss could be dispensed with, though a supply might be useful in the arrangements. A few of the most useful plants which can be employed in finishing off a group consist of *Adiantum cuneatum*, *Acalypha*, *Aspidistra*, *Abutilons*, *Crotons*, *Dracenas*, *Eulalias*, *Isolepis*, *Nephrolepis*, *Panicum*, and *Palms*.—E. D.



The Spindle Tree: *Euonymus europæus*.

Why is it, I wonder, that this beautifully fruited and always interesting shrub is so rarely seen in the prominent positions in shrubberies it is rightly entitled to? I trow it is like a good many more of our pretty native plants, simply because they are always with us, and never entailed the cost of importation and its various drawbacks, that we hardly consider it worth while to appreciate them. But again, seeing that *E. europæus* is the only native (British) species of the natural order Celastraceæ, it would seem that this fact would help materially in keeping it in the foreground of our native ornamental shrubs. I am sure that it is quite as pretty as the common *Berberis vulgaris* at this season of the year, but I have yet to see it given the same prominence. The present is perhaps the season of its greatest beauty, when the pretty seed coverings have burst, and the scarlet seeds may easily be detected peeping out of their equally brilliant coat of orange scarlet. I have found the plant growing in many different places and aspects, and the difference is not great, for I think the very best specimen growing wild I have noted was growing in a large wood, and much shaded. I notice that where shaded, or partially so, it makes a taller shrub. One might also write a line in praise of *Euonymus latifolius*, which decks itself consistently with the rich red pendant fruit clusters.—W. H. R., Kent.

Blinds for Glass Houses.

The adoption of blinds for the shading of glass houses obtains a mixed reception from gardeners and owners of gardens. The latter object the most frequently on the score of cost; gardeners would much more frequently use them were they within reach. There is no denying their value for houses that require shade in summer, or for reserving internal warmth in winter; but I am somewhat inclined to the opinion that the simplest form of roller canvas blind is preferable to those of Parisian wood pattern, except on small size houses where there is less leverage and friction. On short, span-roofed houses with a ridge protector, any of the modern roller type may be adopted with success and economy. Spring rollers I have found very objectionable, because, when wet, or even damp, they are not equal to the weight, and they have to be left sometimes an inconveniently long time before they are dry enough for the springs to act. Quite the simplest and best form of blind I have met with is that which I saw in Messrs. Sutton's nurseries some years since at Reading. Here the material was fixed to the ridge, and cut to fit the roof, the roller being fixed on the lower edge of the material. The roller projected over the end of the roof some 2ft or more, and round this the rope gathered as it travelled up the roof, and, passing through a pulley at the ridge, gave the means for their use. Nothing seemed more simple, and certainly no other form of blind I have met with possessed the advantage this did, viewed either in the light of economy or the facility with which it could be manipulated. It struck me as being somewhat remarkable that such evenness of draught should come from the winding of gathering rope around this projecting portion of the wood roller, but so it was; there was not the slightest hitch, friction, or trouble in their working, and the ease with which it travelled, and the unusual length of moving blind, was remarkable. This has reference to an inspection made several years since. Whether the same principle is in use now I do not know; but the same I have met with in one or two private gardens, and which, I need scarcely say, were duly praised by those who had the working of them.

It is claimed for the Parisian type that they allow of a certain amount of light, by their adjustment to certain angles, passing between the bars. This is no doubt true to a certain extent. Where there are lofty glass sides to corridors or conservatories they are no doubt a boon in summer, because so easily adjusted, and in an upright position they do not so soon get out of order as on sloping roofs. Many a greenhouse might be rendered more comfortable inside, and better in appearance outside, if, instead of lime and other washes there were roller blinds, whether they be canvas or wood; but so it is, blinds are a luxury that a great many gardens can ill afford, and the best of other substitutes have to be used, often at the sacrifice of time that can badly be spared in spring time in their application. The

above lines were penned after perusing your answer to "Ignoramus" on page 432, November 7, and the letter in last week's issue written by your correspondent who signed himself "Light and Shade."—WESTERN.

Outdoor Chrysanthemums.

Does "K., Dublin," not grow any of the new outdoor Chrysanthemums? On page 464 of the Journal he complains that the Mums are late (meaning the indoor varieties), and flowers scarce; but if he had a bed of these profuse flowering early Chrysanthemums, which have been so wonderfully improved by recent introductions, he would not have to depend on a few belated Roses for cut bloom, even at the date he writes in November. At the recent show of the Royal Horticultural Society of Ireland (to which he refers in another paragraph) the abundant display there of these outdoor sorts was proof, if proof were needed, of their great value for cut flower purposes. And there was no lack of colour for there were glowing crimsons, golden yellows and bronzes, with spotless whites, and rich mauves, and all the intermediate shades formerly found only in the indoor kinds. To come unexpectedly on a well-assorted garden border of these on an autumn day, when all around the leaves are falling, or fallen, is a surprise even to those already somewhat acquainted with their brilliant colourings; and the best of it is that anyone can grow them, a little water in dry weather, and a stake and tie when necessary, being all that is required of the cultivator.—W. M. J.

Gardeners and Estate Agents.

I suppose it is natural that gardeners should focus estate agents from their own point of view, which, it need hardly be said, is at an angle widely apart from that of the master of both, and from that of the agent himself. It is only fair to the latter to remember that his position is one of much difficulty, and the temptation to save money on the estate, or, at least, to spend it alone on that which makes the greatest show, is a temptation that is never absent. In the same way tenants of all kinds find the genus a hard one to deal with, for while a few pounds off a rent may not appear a great thing to a proprietor, his agent cannot lightly escape from the annual balance about which little of sentiment gathers; so, on the one hand, he is naturally impelled to be grasping, and, on the other, to be unduly saving, too often niggardly. That, I think, in brief, is his position. It, of course, involves the commission of deeds that a proprietor, if acting himself, would not perpetrate, and also the omission of others that would in a like case not be passed over. Everyone who has had experience of life on an estate must be aware that this is a fact, and instances may be called to mind where the wishes of the proprietor have been brushed aside and his best interests often sacrificed. But it is right we should deal equally fairly with all; and how frequently has it occurred that gardeners, as well as other heads of departments, have failed in those very duties which the agent has been called in to assume? If a garden is to be run successfully, or, in other words, if its owner wishes it to be run successfully, there ought to be no intermediate person to interfere; but it requires the gardener on his part to be, like Caesar's wife, above suspicion in all things, and, above all, not to indulge in expensive fads, as so many who have been allowed a free hand have done. Those who succeed gardeners of this class know too well the unsatisfactory feelings left behind, and which they have to live down.

Now, though I could give numbers of instances of dealings on the parts of agents that would place them in a light not altogether the best, I don't think that any good would follow from doing so. The practical question with us is that there they are, and how shall we make the best of them? We have nothing, let us not forget, to do with the shortcomings of others, especially when we have a few of our own to make up. The greatest point, I think, is to preserve one's own self-respect, which includes doing one's duty not so much to please others as oneself; and that is not so easy of accomplishment if the standard is of the right kind. A great matter, too, is to try to meet the wishes of agents where they are reasonable, and thus where they are not reasonable one possesses the greater effect in pointing out weaknesses. The suppression also of a spirit of discontent is of much value. Some gardeners are wholly taken up with detailing the faults of their superiors, a habit which is bad for them in two ways, as it makes them uncharitable; and there are always people who delight in retailing the sayings and doings of their neighbour to those whom it were better not to have heard of these.—A SCOTTISH READER.

Fig, Grosse Monstreuse de Lipari.

We do not recommend the above variety for general use, but where very large Figs are required for special purposes it is certainly a variety that should be selected. The fact is singular and significant, that neither Messrs. Bunyard, Rivers, nor Veitch, Limited, include it in their fruit catalogues. At the same time the variety bears fine, handsome fruits, and fruits with moderate freedom in pots. To secure fruits of the finest character, the crops should be thinned whenever a heavy display is shown, and the plants will require to be supplied with liquid nourishment at the root.

The following is Dr. Hogg's description of Fig Grosse Monstreuse de Lipari: "Fruits large, roundish, turbinate, much flattened at the apex. Skin light brown or chestnut, shading off to dark, and with dark-coloured ribs, with occasional dark spots, the whole covered with a thick bloom; stalk short, thick. The eye is large and closed. Flesh dull red, thick, juicy,



FIG, GROSSE MONSTREUSE DE LIPARI.

and pleasantly flavoured. Habit of plant robust, and very prolific. A very meritorious variety, and suitable for cultivation either in the open or under glass." The late Dr. Hogg, in his "Fruit Manual," adds that he found this variety in an orchard of the department of Bouches de Rhone, and introduced it to the Chiswick gardens of the Royal Horticultural Society, where, we believe, plants of it are grown.

Earnings of Potato Pickers.

The Potato harvest in the Lincolnshire Fens, which has been in active progress for the last two months, is now complete. A feature this year has been the work of Irish pickers, who have not previously remained after the corn harvest. A local farmer reports that twenty of these men in twenty days earned £83, in which time they picked 83 acres of Potatoes, yielding at a moderate estimate eight tons per acre. In the above case, each man would pick not far short of two tons a day, and earned 4s. 2d. a day. Women pickers have been earning up to 3s. 6d. a day, but when working by the day, and not on piece, their earnings would be about 2s. 6d. to 3s. In the Holbeach district, where Potatoes are more extensively grown than probably anywhere in England, some large gangs of pickers have been at work. On one farm alone, where the crop was bought by a London firm, 130 pickers were at work one day.

Societies.

Royal Horticultural—Drill Hall, November 26th.

The meeting on Tuesday last was exceedingly interesting. Fruit in bottles was largely displayed, and a lecture on this method of preserving fruit was delivered in the afternoon. Mr. Beckett exhibited an extraordinary large collection of vegetables, all of grand quality. Mr. Goodacre had some splendid Grapes, while the grouplets of Orchids were choice and formed an attractive feature. Chrysanthemums were seen in a few instances, and there were groups of Begonias from various parties. Captain Holford made a blaze with a fine collection of Zonal Pelargoniums.

Orchid Committee.

Present: Harry J. Veitch, Esq., in the chair; with Messrs. James O'Brien, de B. Crawshay, Frank A. Rehder, W. Cobb, E. Hill, N. Rilney, J. W. Odell, F. J. Thorne, W. H. Young, J. G. Fowley, and H. Little.

Messrs. J. Veitch and Sons, Limited, Royal Exotic Nursery, Chelsea, sent a group chiefly comprising Cattleyas and Lælio-Cattleyas. L. Digbyano-purpurata was finely represented, and a plant of L.-C. Bryan bore a four-bloomed truss of handsome flowers. L.-C. Semiramis superba (F.C.C.), with rich purple lip and deep mauve sepals and petals; L.-C. Pallas, L. Mrs. M. Gratrix, and the beautiful though delicate looking C. Portia. (Silver Flora Medal.)

G. F. Moore, Esq. (gardener, Mr. Morrie), Chardwar, Bourton-on-Water, Gloucester, staged a remarkably handsome group of cut flowers of Cypripediums, set off with Maidenhair Ferns. Here was included C. Leeannum punctatissimum, C. insigne Cobbianum, C. i. Sanderæ, C. i. Standard, and other exceedingly beautiful varieties. The blooms were all large, and finely coloured. (Silver-gilt Flora Medal.)

Messrs. Hugh Low and Co., Bush Hill Park, Middlesex, sent a new Cattleya, C. Grossi, a natural hybrid found in Brazil. Mr. de B. Crawshay, Rosefield, Sevenoaks, staged a strongly flowered specimen of Odontoglossum crispum Crawshayanum. A. J. Keeling, Esq., High View Nursery, Cottingley, Bingley, Yorkshire, staged a bright little group of Orchids, in which were Cattleya labiata superba, Vanda carulea, and a fine selection of Cypripediums, of which C. Actæus, C. x Smithi (Lawrenceanum x ciliare); C. Leeannum, Keeling's var.; and C. insigne major. (Silver Banksian Medal.) There were several single plant exhibits from various gardens. F. A. Rehder, Esq. (gardener, Mr. J. Norris), 34, The Avenue, Gipsy Hill, had also a group of Cypripediums in pots. (Bronze Banksian Medal.)

Floral Committee.

Present: W. Marshall, Esq., in the chair; with Messrs. Chas. T. Druery, George Nicholson, H. B. May, Richard Dean, H. Selfe Leonard, J. F. McLeod, J. Jennings, W. Howe, C. R. Fielder, Chas. Dixon, G. Reuthe, C. Blick, C. J. Salter, R. C. Notcutt, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, W. J. James, O. Thomas, James Walker, J. H. Fitt, and E. T. Cook.

Captain Holford, C.I.E. (gardener, Mr. A. Chapman), Weston-birt, Tetbury, Gloucestershire, sent a long bank of Zonal Pelargoniums in the form of bushy pot plants, bearing a splendid display of useful flowers for various decorative purposes. The best varieties were Mrs. Williams, rose-pink; Mark Twain, rose-scarlet; Norah, Apple-blossom colour; May Hamilton, rich crimson; and Herrick, crimson scarlet. (Silver-gilt Flora Medal.)

Mr. R. C. Notcutt, Broughton Nursery, Ipswich, sent single decorative Chrysanthemums, the best being Nelly Agate, white; Mr. A. Double, red; Princess Maude, yellow; E. Pagram, mauve with white centre; King of Siam, crimson; Madge, bronze-red; Yellow Jane, a beautiful sort, with narrow, twisted petals; and the snow white Purity.

Messrs. W. Wells and Co., Earlswood Nurseries, Redhill, Surrey, had decorative Chrysanthemums, and a selection of exhibition blooms. Madame R. Cadbury was here, also Matthew Smith, Calvat's Sun, Madame P. Radaelli, W. R. Church, and Mrs. T. W. Pockett. Of the singles the most distinct were Gertie Fletcher, amaranth; Mrs. E. Brigg, bronzy-yellow; Dorothy, pinky-white; Golden Faden, spidery petals of a bronze tint; Sir R. Buller, brick red with golden centre; and Earlswood Beauty, soft white, and of large size. (Silver Banksian Medal.) Mr. G. Lange, Hanworth Road, Hampton, Middlesex, set up a group of Begonia Gloire de Lorraine, and a new sport named alba grandiflora, which resembles Caledonia, but is more erect in habit. (Silver Banksian Medal.) E. A. Hambro, Esq., Hayes Place, Hayes, Kent, obtained a Silver-gilt Medal for a group of Begonia Gloire de Lorraine. Lord Aldenham had an exhibit of Chrysanthemums. (Silver Banksian Medal.)

Fruit and Vegetable Committee.

Present: H. Balderson, Esq., in the chair; with Messrs. Jas. Cheal, Henry Esling, George Woodward, J. W. Bates, S. Mortimer, Alex. Dean, W. Fyfe, James Smith, F. Q. Lane,

George Wythes, J. Willard, G. Norman, James H. Veitch, W. Poupard, A. H. Pearson, W. Wilks, E. Beckett, and G. W. Thos. Miles.

Bottled fruit came from the Swanley Horticultural College (Silver Banksian Medal), and from Lady Warwick's Hostel, Reading (Silver Banksian Medal), while an exhibit of five tons of bottled fruits and vegetables occupied the centre of the Hall from Mr. J. E. Austin, St. James' Works, Kingston-on-Thames. The process of bottling will be found summarised in a report of Mr. Austin's lecture delivered in the afternoon, and furnished on one of our pages this week. The fruits and vegetables bottled appeared in splendid condition, and included Gooseberries, Green-gages, Plums, Morello Cherries, Rhubarb, Peaches, Bananas, Pine Apples, Currants, Green Peas, Asparagus, French Beans, while Raspberries, Blackberries, and Mushrooms were also shown in quantity. (Silver-gilt Knightian Medal.) Messrs. E. Lec and Co., 19, Knight-ridge Street, Maidstone, Kent, also showed bottled fruit. (Bronze Medal.)

Mr. Edward Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts, contributed an extensive collection of fresh vegetables of the very highest quality all round. The exhibit covered three-quarters of the length of one side table, and was, as usual with Mr. Beckett's displays, set up with great taste and judgment. The following varieties were included: Onions—Selected Ailsa Craig, Masterpiece, Blood Red, and Record. Potatoes—Goldfinder, Monarch, Up-to-Date, Abundance, Royalty. Mr. Brezee (reddish), and Satisfaction. Beet—Prag-nell's Exhibition, Blood Red, and Perfection. Leeks—Prize-taker, &c.; Michaelmas White Broccoli; James' Scarlet Intermediate Carrot, New Polar Kale, Best of All Savoy, and Cabbages, Celery, Parsnips, Mushrooms, Turnips, Salsafy, Capsicum, Cucumbers, Radishes, Cress, Brussels Sprouts, Chervil, Dandelion, and Selected Canadian Wonder French Beans, an exhibit which well won the Gold Medal.

Messrs. H. Cannell and Sons, Swanley, Kent, again staged a large collection of Apples, such as we have on previous occasions detailed. The fruit was in the best condition possible. (Silver gilt Knightian Medal.) The Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby, staged sixteen bunches of black Grapes, and twelve bunches of white ones, twenty-eight bunches in all. Bowood Muscat was remarkably fine, the bunches being long and even, with large, finely coloured berries. Muscat of Alexandria was likewise heavy and well finished. Lady Downe's was perfect in form and colour, as was also Cooper's Black. (Silver Knightian Medal.)

Certificates and Awards of Merit.

Begonia Ideale (J. Veitch & Sons, Ltd.).—One of the finest varieties of the well-known Veitchian winter-flowering Begonias; it is dwarf, robust, and very floriferous; in colour rosy-crimson carmine, smaller in size than Mrs. Heal and others, but has a greater number of erectly held flowers. Many are semi-double (Award of Merit).

Cattleya Portia superba (R. Tunstill, Esq.).—The result of a cross between *C. Bowringiana* and *C. labiata*; it partakes of the character of both parents, but *Bowringiana* most conspicuously; the petals and sepals are spreading, as in *labiata*, and larger than those of the other parent. Colour, deep rich purple-mauve (Award of Merit).

Cypripedium Helena (R. Tunstill, Esq.).—The standard is mottled with chocolate spots, and has a light greenish edge; the petals and sepals are somewhat incurving, purplish suffused, as is the lengthened lip (Award of Merit).

Cypripedium Mrs. A. Foulter (J. Gurney Foulter, Esq.).—Lip reddish brown, sepals and petals veined with same colour over a greenish ground; the standard is the great feature, and is very beautiful, both halves curving in upon the lip and coloured a rich purple-mauve, deepest in tone at the base, with a beautiful pale lavender edge (Award of Merit).

Cypripedium Salus Mrs. Wellesley (F. Wellesley, Woking).—A peculiar flower, a cross between *C. Dayana* and *C. coneolor*; the sepals, petals, and lip are long and narrow in form, speckled with dark dots, except the lip, which is coloured mauve-purple; the standard has a greenish edge; the breadth and depth is about 5 inches each way (Award of Merit).

Laelio-Cattleya × Ilione (J. Veitch & Sons, Ltd.).—The parents are *C. Bowringiana* and *L.-C. Dominiana Langleyensis*; it is almost purely of *Bowringiana* type, but is larger and much deeper in colour (Award of Merit).

L.-C. Semiramis superba (J. Veitch & Sons, Ltd.).—This beautiful variety partakes of the *Jongheana* type so far as form goes; the colour of the lip is deep amaranth with a broad white ring within the throat; petals and sepals deep rose-mauve (First-class Certificate).

Laelia × "Omen" (J. Veitch & Sons, Ltd.).—Parents, *L. autumnalis* and *L. purpurata*; slender and delicate looking in build, the narrow petals are coloured pale lilac-mauve, silvery at the base; lip revolute and projecting, deep purple at the mouth (Award of Merit).

Cypripedium Hutchinsiae (Mrs. Haywood, Reigate).—A large flower with handsome dark colouring (Award of Merit).

Scolopendrium vulgare Drummondiae (C. Druery, Esq.).—A variety of vulgare with proliferous edges; very interesting and ornamental (Award of Merit).

Thornton Heath Horticultural, November 11th and 12th.

A Chrysanthemum Show was held at the Public Hall, Thornton Heath, on Monday and Tuesday last, in connection with the Thornton Heath and District Horticultural Society, making the third show which that energetic society has held this year. The competitions were confined to the members of the society. Out of a total of about twenty-six classes, only four failed to gain entries, but while in a few others the entries were so limited that only one prize was awarded, the majority brought forth numerous entries, and competition in many cases was very keen.

Mr. E. Denton, a local nurseryman, obtained the prizes in his special section, while the gardeners who succeeded best were Mr. A. Heritage, Cotfield Gardens, for a dozen distinct Japs, he winning a silver Banksian medal of the Royal Horticultural Society; Mr. G. Prebble came second. In other classes the principal winners were Messrs. J. Reed, G. Prebble, and F. T. Wright. Dr. Jackson took the lead in the cottagers' classes for dishes of Apples and other fruit. The venue of the exhibition was, as usual, the Public Hall at Thornton Heath, the latter a South London district.

The opening ceremony was performed by the Mayor (Coun. N. Page). The Mayor was accompanied by the Mayoress, and there were also present at the opening ceremony the Rev. P. D. Woods, president of the society, Dr. Jackson, hon. treasurer, Mr. A. E. Parnell, Mr. J. Reed, Mr. T. Cook, jun., Coun. Betteridge, Coun. Major Read, Mr. J. Read, and Mr. J. P. H. Bewsher, the hon. sec., who works so attentively and with such constant enthusiasm.

Dulwich Chrysanthemum, November 12th and 13th.

The eighth annual exhibition of the Dulwich Chrysanthemum Society was held at the Dulwich Baths on November 12 and 13, 1901, and drew forth the admiration of everyone, both the expert and the casual visitor being equally pleased with the exhibits. Although there was a slight falling off from last year in the number of entries, the quality of the exhibits showed vast improvement, and it is difficult to believe that it is possible to bring together a finer collection of blooms in such excellent quality in any local show, and, considering that the whole of the members reside in a radius of three miles of the exhibition room, it is again unmistakeably demonstrated what grand results can be obtained within the metropolitan area, in spite of fogs and other drawbacks, of which we have had such depressing examples recently. In the open class for twenty-four Japanese blooms in eighteen varieties, T. Dunmall, gardener to C. F. Yeoman, Esq., of Meopham, was first, and E. Dove, gardener to E. J. Wythe, Esq., of Bickley Hall, was second. Grand quality blooms were staged in both exhibits. In the gardeners' section the principal prize-winners were A. Winter, gardener to E. Manwaring, Esq., College Road, Dulwich, who staged a very fine 60ft group, which included a grand batch of the Carnot family on single stems. First prize was awarded to the same competitor in the class for nine blooms in a vase, for which there were eight exhibits. The winning blooms were really magnificent specimens, and included a G. J. Warren, which was awarded the special prize as the best bloom in the show.

Mr. W. Taylor, of Tewkesbury Lodge, who took first prize for six bush plants, consisting of Vivian Morel, Phœbus, Mrs. Caterer, Lord Ludlow, Chas. Davis, and Lady Hanham. First for twelve Japanese blooms distinct; a fine board of high-class blooms out of five entries. First for six Japanese one variety, Mr. T. Carrington, very fine. First for twelve incurved, very nicely finished. First for basket of Chrysanthemums. Other prominent members in the gardeners' section were T. Martin, G. Houlton, P. R. Dunn, E. Rea, and H. G. McLean. The section throughout being a great improvement on any previous year. In the amateur section the principal winners were Mr. H. Foster, first for 50ft group, for which three competitors staged fine groups. Mr. H. W. Wells, first for twenty-four plants, having finely finished blooms. Mr. A. Shinn carried off the premier prize for twelve cut Japanese, six Japanese alike, and vase of six blooms, the competition being very keen. Six exhibits for twelve Japanese and eight for the vase showing how enterprising the amateur members of the society are. Mr. Shinn's exhibit included the premier bloom in the show, a very fine Mr. T. Carrington. Mr. A. M. Falkner, who was not in quite such winning form as usual, Mr. R. Parfitt, and Mr. C. J. Bennetts were also winners in this section. In the ladies' section Mrs. W. Taylor again succeeded in winning first prizes, both for epergne and basket.

The novelties section contained exhibits far above the average, Mr. J. Tavener and Mr. J. S. Silk taking premier prizes for plants, and Mr. E. W. Allen for six Japanese blooms, and also for the vase of six blooms. The number of entries staged was ninety-four, and, as an instance of the keen competition existing, it may be stated that no less than eighteen different exhibitors were winners of thirty first prizes. Mr. R. Forster, of Nunhead Cemetery, exhibited a fine group of Chrysanthemums and other plants, for which a Dulwich Silver-gilt Medal was

awarded. A fine collection of fruit and blooms, grown at Tewkesbury Lodge, Forest Hill, by Mr. W. Taylor, within two miles of the Exhibition Hall, excited considerable interest, and also received a Silver-gilt Medal. The decorations on the platform by Messrs. Peed and Son, of Norwood Road, were very tastefully performed. Foliage plants, with Chrysanthemums, fronted a fine array of fruit, giving a pleasing effect. A well-deserved Silver-gilt Medal was awarded them. The general effect of the show was admired by all, groups of varying sizes being tastefully arranged down each side of the hall, and the whole of the available space down the centre of the hall occupied by tables of cut blooms and vases of blooms, with a raised centre of decorative plants. The attendance, in spite of doubtful weather, was good, and on the second night over 1,000 people visited the show: and the finances of the society must benefit considerably from the well-deserved appreciation shown for the efforts of all concerned.

Ulster Horticultural, November 12th and 13th.

The annual Chrysanthemum Show of the Ulster Horticultural Society was opened on Tuesday, the 12th of this month, in St. George's Market, Belfast. For several years past there has been a steady and encouraging increase in the number of exhibits which have been sent to compete in this well-known show, and the quality has also progressed to an extent which has gladdened the hearts of the promoters. Such aggregations as that of the Ulster Horticultural Society have done much to foster that progressive spirit; but they have done far more, for all kinds and varieties of plants, blooms, fruit, packed fruit, vegetables, farm produce, butter and honey find a place in their annual show, and engender the keenest competition amongst exhibitors. This year the organisers and promoters, who freely give their services for the improvement of horticulture, arboriculture, floriculture, and agriculture in the province of Ulster, had lavished upon the arrangements all that careful study could prescribe and that experience of such exhibitions in the past could dictate.

It was most unfortunate, however, that such a storm of wind and rain should break over Belfast on the day before the exhibition. In Great Edward Street the water was at least a couple of feet deep, and Chichester Street, a portion of Victoria Street, and May Street, were submerged. To these adverse climatic conditions were added an icy cold rain and a gusty wind, which sent the whirling raindrops pelting against the visage of any daring visitor to the show, and consequently there was but a meagre attendance at the opening ceremony, which was to have been performed by the Viscountess Bangor, but who was prevented by the inclement weather. During the afternoon and evening Mr. Crowe's full orchestral band played a varied and well-selected programme of music in excellent style. The judges were as follows: Plants—Mr. J. Forbes, Dumbarton; Mr. H. Henderson, Cairn Castle, Larne; Mr. T. Ryan, Castlewellan. Blooms (Chrysanthemums)—Mr. W. H. Lees, London. Blooms (others)—Mr. James Lynas, Moyallen; Mr. William Crichton, Castleward, Downpatrick. Fruit—Mr. R. Bell, Baronscourt, Newtown Stewart; Mr. J. Whytock, Dalkeith. Packed fruit—Mr. E. W. Pim, Belfast; Mr. J. Malone, Belfast. Vegetables—Mr. D. Morrison, Narro-water Castle; Mr. W. Haldane, Benburb. Farm produce—Mr. J. Lytle, Hillsborough; Mr. R. Somers, Seaford. Butter—Mr. R. J. Drummond, West of Scotland Agricultural College, Kilmarnock.

The annual dinner for the judges and members of the committee was held in Prince's Restaurant, Donegall Square North, under the superintendence of Mr. Everest. The unanimous feeling was expressed that the show would have proved to be one of the greatest successes achieved by the Ulster Horticultural Society if it had been favoured by fine weather. Mr. Watson stated that it was most pleasing to see the great addition to the number of exhibits in the butter section, which totalled 133, against 19 the previous year. The chairman expressed the hope that the Government would, through the department of Agriculture and Technical Education, do something to develop Apple growing in the country, as he was convinced that if provision was made for the proper storing and preservation of the fruit, there was no Apple in the world which could compare with the Irish grown Apple.

Messrs. Alex. Dickson and Sons, of Royal Avenue, Belfast, and Newtownards, proved, as is their custom, to be the largest exhibitors. They had a magnificent exhibit of fruits, covering a space of 50ft, and containing 130 dishes, including Apples, Pears, Quinces, Medlars, Grapes, and Melons. The Apples and Pears were especially fine. They also exhibited bouquets built in the new "Good-year" style of loose graceful sprays of Orchids, manifestly a triumph of floral art. Mr. Hugh Dickson, of the Royal Nurseries, Belmont, was also to the fore, and exhibited a number of very beautiful flowers and plants in extensive variety. Messrs. Frank E. Smith and Co., of 77, High Street, provided one of the most artistic and pleasing stands in the show.

All sections of the show were very satisfactory, and included plant groups, cut flower classes, and sections for fruit, vegetables, farm produce, honey, and other things. The principal garden

prizewinners were Messrs. Peter McHaffie, Hugh Kilpatrick, Richard Draper, Thos. McDonald, and Patrick McQuire for groups of Chrysanthemums; Mr. Henry Crowe for a group of stove plants; while in the cut bloom section the most successful were Messrs. John Johnston (first for twenty vases), Henry Jackson, James H. Robinson, J. Bradshaw, William White, Peter McHaffie, James Reid, Thos. McDonald, William Dickson, and William Hodgson, all in the larger classes.

Mr. Bradshaw, gardener to the Marquis of Downshire, Hillsborough, was first for a table of twelve distinct kinds of dessert fruit; Mr. J. Johnstone, gardener to Lord O'Neill, Shane's Castle, came second; and Mr. John Harding, gardener to Lieut.-General Pakenham, Langford Lodge, third.

The class for a collection of twelve kinds of vegetables brought out some fine displays. The first award was annexed by Mr. William Tyndall, gardener to Cecil Roche Borrowes, Esq., of Giltown, Newbridge; Mr. Nevin Stringer, gardener to General Sir Roger Palmer, Bart., Kenure Park, Rush, formed a good second; and Mr. Peter McHaffie, gardener to William Robertson, Esq., J.P., of Netherbeigh, followed third.

Lynn Chrysanthemum, November 13th and 14th.

This show, which was located in the Music Hall, was an excellent one. As regards the number of entries it surpassed last year's, and as to the merit of the exhibits, speaking of them collectively, it was the opinion of the judges that it was a very good display. Among the pot plants it was noted with pleasure that the foliage was good, this being a point which is sometimes overlooked by the growers, but which is important. The classes for twelve and six plants respectively were of special merit. Among the cut blooms the open class for twenty-four specimens, with not fewer than eighteen varieties, was particularly strong, the difference between the stands being very slight, and the judges considered a long while before making the award. The first prize went to Mr. T. White, who had a lovely collection. The Silver Challenge Cup, offered for the best bloom in the show, was awarded to Mr. G. Watson, of West Lynn, for a massive, refined, yellow specimen, J. C. Clayton. This is the second occasion on which he has won the Cup. The members' classes, in which this bloom was located, were of exceptional merit, and very creditable to the producers, and several extra prizes were awarded.

The fruit section was not large, but comprised some excellent produce. The vegetables, which were staged in the Blackfriars hall, were a numerous lot, but in point of quality this department was behind previous shows, the trying season, doubtless, mainly accounting for this. The judges of the flowers and other garden produce were Messrs. Cadman, of Dereham, and J. T. Sheddick (gardener to the Hon. A. E. Fellowes, of Honingham Hall). Stands of flowers, &c., were exhibited by Mr. J. Thompson, Mr. J. J. Kidd, Hobbies, Limited, and Mr. J. Martin, the last-named showing some beautiful wreaths, &c. As usual, there was a stall of produce for sale in the interests of the hospital, members and others kindly making gifts to it, and it was superintended by Mrs. Bush, Mrs. Alexander, and Mrs. Fitness.

The show was opened on the Wednesday by Mrs. J. A. Parsons, in the unavoidable absence of the Mayor and Mayoress.

Maidenhead Chrysanthemum Society, November 14th.

This show and that of Reading proceeds upon pretty much the same lines, with a few details differing. Here, as at Reading, the "mummers" took possession of the Municipal Chamber, and made a brave display with their blooms. There was but one group in the principal class, and, as at Reading, specimen plants were poor. There were tables of plants of a given size in which flowering and foliated subjects were mingled together. There were tables of Zonal Pelargoniums also, and Begonia Gloire de Lorraine were conspicuous in pots, well grown and flowered. Mr. J. Fulford, Moor Hall Gardens, Coocham, won a handsome Silver Cup with vases of specimen Chrysanthemums. They were placed in a setting of Begonia Caledonia, the very best illustrations of this white sport we have yet seen. Table plants and Chinese Primroses were also shown.

Mr. Watson, gardener to F. Cox, Esq., Harefield, made a hit, for he was first in the larger class for thirty-six Japs, and also in that for twenty-four incurved; and in the latter class Mr. G. Lane, of Ascot, was second. In the class for twelve incurved, Mr. C. Young was first, and in that for twelve Japs Mr. J. F. Young, both having good blooms. The best six Japs of one variety (Madame Carnot), and the best six incurved (C. H. Curtis), both came from Mr. C. Young. There were classes for vases of Chrysanthemums, also for baskets and shower bouquets, in which some of the ladies distinguished themselves. In the way of fruit there were Grapes, Apples and Pears, and Tomatoes, if the latter may be so distinguished. Such dessert Apples as Ribston, Cox's Orange, King, and Blenheim Pippins. Wealthy and Fearn's Pippin were in fine character, and among dessert Pears Marie Louise, Beurré Lucas, Doyenné du Comice, &c.

There were classes for vegetables. Messrs. Carter and Co.

offered special prizes, which brought a good competition. It was quite evident excellent vegetables can be grown in the neighbourhood of Maidenhead. Mr. W. Broughton, florist, Maidenhead, set up a charming group of plants (not for competition), among which could be seen retarded Lilies, &c. Mr. Broughton had very attractive floral decorations, among them one illustration which attracted much attention, a fac-simile of the Gates Ajar sent by the Emperor of Corea to the Capitol at Washington for the obsequies over the remains of President McKinley. Messrs. W. and R. Owen had a large and imposing collection of Chrysanthemums on the platform, and some excellent pottery was contributed by a local manufactory.

Highgate and District Chrysanthemum, November 20th.

The seventeenth annual dinner of the above society was held on the 20th inst., the president, C. F. Cory-Wright, J.P., D.L., presiding. He was supported by Captain C. B. Balfour, M.P., several of the vice-presidents, and about eighty members and friends of the society, including the treasurer, Mr. J. McKerchar, Mr. T. Bevan, Mr. J. H. Witty, Mr. H. Barnaby (the first secretary of the society), and Mr. W. E. Boyce, the present secretary. The tables were profusely decorated with Chrysanthemum blooms, some fine specimens coming from Messrs. H. Cannell and Sons. After the Royal toasts had been loyally honoured, the toast of the evening, viz., that of "The Society and the President," was proposed by Mr. H. W. Birks, who said that the society had almost attained hoary antiquity, and, looking back on the past, he thought he could claim to have done something for the district. The president, in responding, said that in his opinion the Northfield Hall was not a proper place for a show, and he suggested that the committee should take the show to the Alexandra Palace. He was sure that they would be very glad to hear that Lord Mansfield had given him permission to say that he would be pleased to become their president for next year, and that he would open their show, and also attend their annual dinner. Mr. T. Bevan gave "the Vice-Presidents and Donors of Special Prizes," to which Mr. S. L. Dove, J.P., responded. Mr. E. H. Smithett proposed "The Officers and Committee," and complimented the secretary on the arrangements made for the show, which he considered was one of the finest he had ever seen. The toast was responded to by the treasurer, Mr. J. McKerchar. Other toasts followed, and a capital musical programme interspersed the toast list, the hearty singing of "Auld Lang Syne" concluding a most enjoyable evening.

Leamington, Warwick and District, Nov. 21, 22 and 23.

Leamington Spa is noted for beauty of many kinds, and in numerous respects it is the most delightful of Midland towns, where at various seasons of the year music of the highest class can be enjoyed amid the charms of lovely surroundings. A large portion of the spacious "Pump Rooms," which in winter is known as "Arcadia," was on the above dates the scene of a highly successful Chrysanthemum Show. The splendid groups of Chrysanthemums and other plants which occupied the centre of the building were a fine feature; cut blooms were also of wonderful quality, and fruit and vegetables numerous and good. The fittings around the walls formed both a beautiful and suitable background for the exhibits, and considerably enhanced the general effect. The Blue Hungarian Band performed twice daily during the course of the show. It is, therefore, by no means surprising to find the attendance was a record one, and that the early struggles of the society have at length been overcome. E. A. Smyth-Ryland, Esq., and the Mayor of Leamington, were each donors of substantial prizes. The committee, of which Mr. R. Jones is chairman, and the energetic secretary, Mr. A. J. Nichols, are to be congratulated on the result of their labours. Mr. C. S. Birch, a popular townsman, has also contributed largely to the success of the venture by associating it with "Arcadia," and providing such exquisite music.

CUT BLOOMS.—For twenty-four Japanese distinct a special prize of five guineas was offered by C. A. Smith-Ryland, Esq., for the best exhibit; second prize, £2; third, £1. In this class many grand flowers were staged. Mr. A. Chandler, gardener to A. James, Esq., Coton House, Rugby, proved the winner. His flowers were of great depth, fresh and well coloured, being so good I append their names. Those marked with an asterisk were especially good. Back row—Mrs. J. Lewis,* Silver King, M. Louis Remy, Graphic, Australie, G. J. Warren, Mrs. Mease,* and Madame Carnot.* Middle row—Madame G. Debie,* Madame G. Henri, Nellie Perkins, Mrs. J. Bryant, E. Molyneux,* Etoile de Lyon, Master H. Tucker,* and Madame Von Andre. Front row—Mons. C. de Léché, Oceana, Madame R. Cadbury,* Phœbus, Lionel Humphrey, Miss J. Cottie, Mrs. Barkley, and Mrs. G. Mileham. The second prize went to Mr. H. Blakeway, gardener to P. A. Muntz, Esq., M.P., Rugby, who also staged heavy blooms. Mr. H. Liney, gardener to W. M. Low, Esq., Wellesbourne House, was an exceedingly close third, staging fresh, highly coloured blooms.

For twelve incurved distinct, and a like number of Japanese,

a Silver Cup, valued at three guineas, was offered as a first prize, and here the struggle for supremacy was a grand one; indeed, worthy to rank with some of the stiffest fights in the Chrysanthemum world. Mr. Chandler, however, came out "on top" (it is really wonderful how Chrysanthemum men manage to "just" beat each other). The winner was very strong in incurveds, but lost points on the Japanese. The varieties were, Japanese, back row—Madame Cadbury,* Australie,* M. Louis Remy, and Madame Carnot.* Middle row—Madame G. Debie, Master H. Tucker, Etoile de Lyon,* Mrs. G. Mileham. Front row—G. J. Warren, Mrs. J. Lewis, Lionel Humphrey, and Mrs. Mease. Incurved—Duchess of Fife,* Frank Hammond,* Madame Lucie Faure,* Lady Isabel, General Symons,* Ma Perfection, Mrs. H. J. Jones, C. H. Curtis,* Nellie Threlfall, W. Tunnington,* Bonnie Dundee,* and J. Agate. Mr. R. Jones, gardener to C. A. Smith-Ryland, Esq., Barford Hill, won the second prize with a very fine exhibit. His Japanese were large, fresh, and well coloured. Many of his incurveds were also of fine depth, and solid, but he lost a few points on the others. The third prize went to Mr. W. L. Bastin, gardener to A. Henderson, Esq., M.P., Farringdon. He also staged grand incurveds, but fell away considerably with the Japanese. Messrs. Chandler and Jones secured (in the order given) the prizes for twelve incurveds in not less than nine varieties. For twelve Japanese distinct the prizes went to Mr. Chandler, Mr. Blakeway, and Mr. Jones. Six grand blooms of Madame Cadbury secured for Mr. Chandler the special prize offered for that number of Japanese blooms, and Mr. L. Bastin won for six incurved with deep, solid blooms of Countess of Warwick, Madame Lucie Faure, and Mrs. J. Eadie. This prize was a Silver Medal given by the Ichthemie Guano Company.

In the local class for twelve Japanese, Mr. W. Goodman, gardener to P. A. Leaf, Esq., was first, and Mr. W. Wright, gardener to M. P. Lucas, Esq., second. Mr. Jones won the cruet-stand offered by Messrs. Burgis and Colbourne for twelve Japanese, being followed by Mr. Goodman. For twelve Chrysanthemums on long stems, arranged in a vase, Mr. J. Rench, gardener to Alderman G. A. Bland, was first, Messrs. Goodman and Wright following in the order named.

FLORAL DESIGNS.—Mr. W. Finch, of Coventry, was first for a bouquet of Chrysanthemums, with a well finished example, Mr. Vause, Leamington, being second, and Mr. C. Finch third. For a cross of Chrysanthemums Mr. C. Finch won with a splendid exhibit, being followed by Mr. Vause, and Mr. R. Greenfield, jun., Leamington. The three last-named exhibitors won in the same order for a wreath of Chrysanthemums. Mr. W. Draper, gardener to R. C. Milne, Esq., was first for six foliage plants in 5in pots. The Leamington Nurserymen and Florists second, and Mr. Chandler third.

GROUPS.—For a miscellaneous group of plants (Chrysanthemums excluded), not to exceed 100 square feet, prizes of £5, £3, and £2 were offered. The Leamington Nurserymen and Florists here created a delightful feature, and won the first prize well. A low arch formed the centre; this was surmounted by a mass of scarlet Salvia, graceful foliage plants, and Orchids. Pedestals of cork were also employed here and there, brightly coloured and graceful plants being arranged in prominent positions, the whole springing from a groundwork of moss, formed one of the great features of the show. Mr. Vause was second. He, too, staged a grand group. The same firm also proved victorious in the class for a group of Chrysanthemums in pots; the blooms were of high quality, and the arrangement very smart.

DINNER TABLE DECORATIONS.—For a decorated dinner table, fully laid, three contestants entered the field. Mr. W. Vause proved the winner; his arrangement was well finished, but slightly heavy. The Leamington Nurserymen and Florists, who came in second, showed in their design a pretty idea, but the general arrangement of the flowers lacked finish, and the surface needed light materials to take off the flatness. Mr. E. M. Garlic was a good third; his arrangement was well balanced, but lacked finish at some points. Some of the flowers had lost their glossy freshness, and the pale yellow material down the centre of the table did not harmonise well with the flowers used.

FRUITS.—For a collection of fruit, Mr. T. Kean, gardener to F. Williams, Esq., Barford, was first. He staged upwards of twenty dishes, principally consisting of very fine Apples and Pears. Mr. E. Crump, Leamington, who was placed second, put up a very smart exhibit, which contained several fine bunches of Grapes, and good pyramids of Apples, and some good dishes of Pears; but the greater number of fine dishes in his opponent's collection placed him slightly ahead. The committee will probably next year see their way to limit the number of dishes. Third, Mr. C. Hunt, Barford. Mr. Chandler won the principal prizes for Grapes, among them being one offered by Messrs. W. Thomson and Sons, Limited, Clovenfords. He also won for three dishes of dessert Apples, Mr. Kean being first for a like number of Pears.

MISCELLANEOUS EXHIBITS.—These were a great feature, and deserve more notice than limited space will allow us to give. Messrs. Sutton and Sons, of Reading, staged a wonderful collection of Potatoes and Cyclamen. The former were handsome in

shape, and clean and bright in the skin; the Cyclamen sturdily grown and well flowered. The Society's Gold Medal was awarded. Certificates of Merit were also awarded to Mr. H. Deverill, Banbury, for a grand collection of Onions, and for Zonal Pelargoniums; to Messrs. Hinton, Bros., Warwick, for a good collection of shrubs; to Mr. R. Greenfield, Leamington, for a miscellaneous collection of plants; and to Messrs. W. Wells and Co., Earlswood Nurseries, Redhill, for a collection of new varieties of Chrysanthemums. Among them two varieties were conspicuous, viz., Henry Barnes, which may be described as a glorified E. Molyneux, and Mrs. E. Thirkell, a grand yellow; each was awarded a First-class Certificate.

Dundee Chrysanthemum, November 21st, 22nd, and 23rd.

A very successful exhibition was that held last week in the Drill Hall at Dundee. The chief interest is centred in the contest for the Corporation Vase, a handsome trophy presented to the society by the Town Council. The coveted honour on this occasion fell to Mr. J. Beisant (or Besant), gardener to Mrs. George Armitstead, Castle Huntley, Longforgan. Some splendid blooms of Madame R. Cadbury, J. R. Upton, and Mrs. J. Weeks were here included. The second prize in this class (for twelve vases of Japs) was annexed by Mr. David Nicoll, Rossie, Forgan-denny; and the third to another famous Scottish grower, Mr. David Keillor, Seabourne, Broughty Ferry. Mr. Beisant stood foremost also for the thirty-six Japs in half that number of varieties; while for thirty-six distinct blooms the Challenge Cup presented by Mrs. Armitstead was secured by Mr. D. Nicoll. Mr. J. H. Cumming, gardener at Grantully Castle, led for two dozen Japs in a dozen varieties, winning another Challenge Cup that is offered by J. J. Watson, Esq. Other chief winners were Messrs. J. Baird, George Ruckbie, R. J. Walker, W. Kennedy, and R. W. Saunders. The competition for plants was very fair, as was that for fruit and vegetables. The show was opened by Sir James Low, surrounded by many persons of local distinction. Amongst trade growers who supported the show with exhibits were Messrs. W. P. Laird and Sinclair, D. and W. Croll, Storrie and Storrie, all of Dundee; Wells and Co., Earlswood Nurseries, Redhill, Surrey; and Norman Davis, Framfield, Sussex. In every respect this year's show was successful.

Royal Meteorological.

The opening meeting of this society for the session was held on Wednesday evening, the 20th instant, at the Institution of Civil Engineers, Mr. W. H. Dines, B.A., President, in the chair. A paper by Mr. A. Lawrence Rotch on "The Exploration of the Atmosphere at Sea by means of Kites" was read by the secretary. The author has for some years past devoted his attention to the use of kites to obtain meteorological observations at the Blue Hill Observatory, Mass., U.S.A., and he has successfully carried on the work of exploring the air there to a height of three miles by several hundred kite flights, executed in varied weather conditions, whenever the velocity of the wind exceeded twelve miles an hour. Certain types of weather, however, such as anticyclones, accompanied by light winds, can rarely be studied. Mr. Rotch now proposes the employment of kites carrying meteorographs on steamships, especially on vessels cruising in tropical oceans. He has himself demonstrated the practicability of this scheme, as on August 22 last he raised a kite to an elevation of half a mile from a tow-boat in Massachusetts Bay, when the velocity of the wind at sea-level varied between six and ten miles an hour. At the end of the same month, when crossing the North Atlantic from Boston to Liverpool on the steamship Commonwealth, he was able to raise kites carrying a meteorograph to an altitude of 1,800ft on five days out of the eight. The chief feature of these records was the rapid change of temperature with height.

A paper by Professor J. Milne, F.R.S., on "Meteorological Phenomena in Relation to Changes in the Vertical," was also read by the secretary. When resident in Japan some years ago, the author carried on numerous observations by seismographs for ascertaining changes in the vertical, and found that the more important displacements of the horizontal pendulums are of three types, viz., "intermediate," "long," and "short" period wanderings. During the last five years Professor Milne has had continuous photographic records of a horizontal pendulum at his residence at Shide, Isle of Wight, and he now makes a comparison of these records with the weather conditions prevailing during the first six months of 1901. He says that assuming that a locality can be chosen where the diurnal wave and effects due to rain and dessication are small, which his observations indicate as possible, records of what appear to be the effects due to barometrical gradients may be obtained. When these are large and appear suddenly, the movements of the pendulum may be marked. At Shide the westerly displacement of a pendulum has for several years past been regarded as indicating the approach of bad weather.

Beckenham Horticultural.

On Friday last the lecture "Bees and Bee-keeping" was delivered by Mr. W. Herrod, E.B.B.A., to a fairly large audience. Some views from drawings placed on the screen showed the various bees, i.e., queen, workers, and drones, from an anatomical point of view, and the differing of their construction clearly explained. The practical operations were shown by photographic views, the operator being in most cases a lady student of the Swanley College. Mr. Herrod explained all in a simple and pleasing way, stating very clearly what to do, how to do it, and what is of prime importance, how not to do it. At the close many questions were replied to by the lecturer, after which Mr. Weeks, of Bromley, proposed a hearty vote of thanks to him. This being enthusiastically accorded, terminated an instructive evening.—T. C.

Croydon Horticultural Mutual Improvement.

A meeting of this society was held last week, when Mr. W. J. Simpson occupied the chair; there was a large attendance of members. The usual business being disposed of, the chairman introduced Mr. J. F. McLeod, Dover House, Roehampton, who gave one of the most practical and interesting papers of the session, the subject being "Some Notes on the Cultivation of the Malmaison Carnations." The paper was listened to with rapt attention throughout, and Mr. McLeod's replies to questions were much appreciated. On the proposition of the chairman, seconded by Mr. Bunyard, and supported by the vice-chairman, Mr. M. E. Mills, a unanimous and hearty vote of thanks was given Mr. McLeod. Messrs. J. R. Box and Co. exhibited some fine dishes of culinary Apples.

Devon and Exeter Gardeners' Association.

Mr. W. Mackay, Royal Nurseries, Exeter, on the evening of November 20, delivered a lecture on "Air, Heat, and Water as applied to Horticulture." We cannot hope to summarise so useful an essay, but we must state that Mr. Mackay did the subject thorough justice. The result of the competition for the best stalk of Brussels Sprouts was that of Mr. John Rogers, gardener to Mrs. Savile, Barley House, was placed first; Mr. Sidney Baker, Weare House Gardens, second; Mr. W. Charley, Wonford House Gardens, third.

Liverpool Amateur Gardeners

The last meeting of the season was held in the Common Hall, Hackins Hey, Liverpool, on Thursday evening a week ago, the attendance and exhibits being quite up to the usual excellence maintained on previous occasions. Chrysanthemums were undoubtedly the principal feature, a decided improvement being noticeable. For twelve Japanese Mr. Ellison and Mrs. Stevenson exhibited in good style, the former winning by the fresher condition of the flowers, although the latter deserves high commendation, owing to the difficulties under which the plants are grown. Mrs. Stevenson won with six very fair incurved. For six Japs Mr. Ardran staged grand flowers, not only taking full points, but also a Certificate of Merit. Extra good were the first prize single Chrysanthemums staged by Mrs. Macgregor, who also won with any other varieties, the open class, with an interesting display of cut blooms, and for the best plant with a well grown incurved variety. The President's class and Certificate was taken by Mrs. Stevenson with an admirably grown plant of Mrs. Barkley. Mr. Dale was also a winner for Japanese. Some nice plants of *Cattleya labiata autumnalis* were exhibited by Mr. Arthur Dodd, the prize for the best Orchid in bloom falling to him. Baskets and hand bouquets were well done, the exhibitors being Mrs. Macgregor, Mrs. Stevenson, Miss Hunter, and Miss Davies. So close was the competition, that the prizes were equally divided.—R. P. R.

Reading and District Gardeners.

The fortnightly meeting of the above Association was held in the Club Room on Monday, the 18th inst, when Mr. Neve presided over a good attendance of members. The subject for the evening was "Root-pruning," and was introduced by Mr. J. S. Powell, of Park Place Gardens, Henley-on-Thames, who dealt with the subject in an exceedingly practical manner, his remarks being based upon the question, "Why is root-pruning necessary, and what advantage do we obtain?" The discussion which followed was well taken up by Messrs. Neve, Woolford, Hinton, Townsend, Alexander, Burfitt, Cretchley, Chamberlain, Wilson, Bryant, and D. Dore. A hearty vote of thanks was accorded to Mr. Powell for his excellent paper. Three new members were elected.

Sheffield Floral and Horticultural.

At last an effort is being made to bring Sheffield into line with other large centres in the matter of horticulture. Some two years ago the Sharrow and District Society was formed, and by

offering fairly liberal prizes in open classes—for a young society—it quickly outgrew its local appellation, and the committee wisely decided to enlarge its scope, and as the "Sheffield" Society it has a promising future. The last show was a decided success from a horticultural point of view, the exhibitors including such growers as Frettingham, Sharp, Artindale, Proctor, Marsden, Machin, Biggin, &c. For the ensuing year Mr. Samuel Roberts, J.P., D.L., is the president, and amongst the vice-presidents are the Duke of Norfolk, E.M., Earl Wharnccliffe, Sir A. Wilson, Herbert Hughes, C.M.G., F. A. Kelly, and other prominent men. Mr. Lewendon, 93, Neill Road, Sheffield, being secretary. The date fixed for the next annual show is August 14, when a Challenge Cup, given by the president, will be offered for Roses. Groups will also be a feature. Successful monthly meetings and exhibits are held, essays, &c., being given, by which the interest of the members is well maintained.

Ipswich Gardeners' Mutual Improvement.

The usual fortnightly meeting of the above society was held on the 21st. inst., Mr. A. Creek presiding over a large attendance of members. A paper upon "Three Good Winter flowering Plants" was read by Mr. Chandler, the plants selected being Callas, Begonia Gloire de Lorraine, and Bouvardias. The essayist dealt in a very clear and practical manner with the details of cultivation, and at the close of a brisk discussion was accorded a hearty vote of thanks. At the next meeting of the society, on December 5, Mr. Wade, of Riverslea Nursery, Colchester, will read a paper on that much debated subject, "A Gardeners' Qualifications."—E. C.

Shirley Gardeners' Mutual Improvement.

There was a good attendance of members at the monthly meeting of the above association, held on Monday, 18th inst., at the Parish Room, Shirley. Mr. B. Ladhams (chairman) presiding. Mr. J. B. Stevenson, of Bournemouth, gave a most able and instructive lecture on "Summer Bedding," with special reference to plants to be used for the Coronation year. The lecturer gave his experience in the different ways and fashions in associating plants, whether to give effect a carpet bedding foliage, or grouping a great variety of combinations were suggested. He also gave many practical hints as to propagating the subjects under notice, having brought two dozen varieties, which were used extensively at Bournemouth. A good discussion took place, in which several members took part. Mrs. Keates, of Rownhams House (gardener, Mr. W. G. Bushell), gained the first prize for three grand specimen blooms of Chrysanthemums on stems 18in long. Captain Thompson, Auld Reekie (gardener, Mr. Framp-ton), second prize. Mrs. Keates also won the society's certificate for six cut blooms of Japs. Colonel Sinkins (gardener, Mr. E. J. Wilcox), Aldermoor House, showed some splendid plants of Begonia Gloire de Lorraine. Mr. B. Ladhams had a very fine group of hardy bedding plants. A vote of thanks to Mr. Stevenson, and to the exhibitors closed a very pleasant evening. The next lecture, "Some Familiar Wild Birds," with special reference to the good and harm they do, by Mr. E. J. Wilcox.—J. M., Sec.

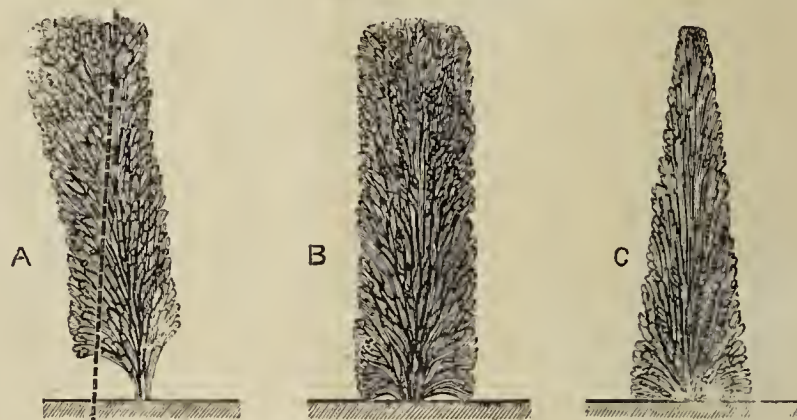
East Suffolk County Council.

The report to the Technical Instruction Committee is as follows:—**HORTICULTURE.**—Mr. Sowman has given 190 lectures and demonstrations during the session. For the fourth year, plots of land, each containing about 10 rods, have been cultivated as model allotments side by side with the men's allotments where possible. These were at Cratfield, Corton, Dunwich, Earl Soham, Framlingham, Higham, Kessingland, Needham Market, Stowmarket, Thorndon, Westleton, and Wrentham. The excessive drought of the past season was felt very much on the light land allotments, but notwithstanding this drawback the produce from the above plots took five first prizes, one second prize, and three third prizes at the Educational Flower Show held at the Crystal Palace in August. The system of Potato planting advocated by Mr. Sowman is being largely adopted with satisfactory results. The crop at Needham Market was an exceptionally heavy one, the produce weighing 210lb from 7lb of seed. Variety, "Up-to-Date." The best allotment was at Wrentham, the second at Stowmarket, and the third at Thorndon Reformatory School, and prizes have been awarded to these places. The allotments with marks out of a possible 170 are given in order of merit: Mr. T. Forder, Thatcher, Wrentham, 117; Mr. T. Parker, schoolmaster, Stowmarket, 114; School-boys, Thorndon, 113; Mr. T. Rice, schoolmaster, Earl Soham, 107; Mr. A. Goodey, labourer, Needham Market, 103; Mr. A. Smith, labourer, Corton, 101; Mr. T. Lingwood, artist, Dunwich, 95; Mr. J. Rivers, labourer, Framlingham, 94; Mr. T. Smith, gardener, Higham, 85; Mr. A. Gardner, labourer, Cratfield, 82; Night School Lads, Kessingland, 73; Mr. A. Elmy, labourer, Westleton, 69.

Hedges.

Hedges are sometimes planted to afford shelter, but more frequently as a fence. However carefully they may be planted and cared for in a young state, it must be admitted that without the same care in after years they soon become unsatisfactory, and unfit for the purpose for which they were planted. Perhaps this remark may apply with much greater force to hedges on the farm than to those about the garden. How often do we meet with hedges that have been left to grow untended for years, dying at the bottom for want of light and air, and with large gaps. When it gets into this state the farmer finds it is of no use to keep his live stock together, so he cuts it down to the ground, very likely with the good resolution to keep it better in future, but with the result that he has no fence at all for some years to come. Even about gardens hedges sometimes become unsatisfactory, though from a somewhat different cause. They are generally kept under the shears, and if due care is not taken to keep them within bounds they gradually become too wide and heavy at the top, and so become, to a certain extent, faulty at the bottom.

Hedges surrounding plantations are especially liable to fail. They very often are damaged by the trees being too close to them, and in time overhanging them. They are thus weakened and drawn outward, so that we very often find them similar in shape to that given at A in the accompanying illustration. When



TRIMMING HEDGES.

such hedges get very bad the usual remedy is to cut them down. This is, however, not always necessary nor desirable. If the timber is well cleaned away from behind them, and they are cut in so that they are narrow at the top, similar to the dotted lines in the section referred to, stopping the upper part of them well back, they will generally fill up at the bottom if kept clean and narrow at the top. The best time to do this, or, indeed, to reduce a hedge in any way, is when the sap begins to move in spring, say from the middle of March to the middle or end of April, according to the season. They then soon break into growth, and are green again in a short time. The ends of the young shoots should be cut off about midsummer, and by the autumn there will be a fair quantity of young growths upon it.

Hedges are to be met with in a great variety of shapes, some of them not commendable. I am rather partial to those with almost perpendicular sides, such as represented at B. But there is no doubt that to keep a good close bottom good enough to turn sheep, &c., the top must be kept a good deal narrower than the base, similar to C. This is not only an advantage in the formation of a good fence, but it is a saving in the labour of keeping. It is quite a common thing to meet with hedges from 2ft to 3ft across the top, and cutting these, propped upon steps or a plank, is a laborious task which may well be avoided. Too much labour is generally expended on the tops of hedges, and too little at the base, in keeping them clean and well furnished. If you can accomplish the latter good quality, the top, which is really of secondary importance, may safely be relied upon to assert its claim to a fair share of the shears, which it should always have. I have sometimes seen young hedges grow four or five years without cutting, to give them strength, and then have them cut down. Is not this a fallacy? I think it is most foolish. If a hedge is from the first turned in the shape of section C, keeping it quite narrow at the top, a good fence will be the result without any cutting down.—R. I.

Fruit Farms on Porto Rico.

Fruit farms are the latest scheme to promote the interests of Porto Rico. A company with a capitalisation of 100,000 dollars, and backed by New York and San Juan firms, is negotiating for land in different portions of the island, on which will be grown all kinds of tropical fruits, winter vegetables, and tropical nursery stock, both fruit and ornamental. The produce will be shipped to New York. A farm of 100 acres is already in operation at Rio Piedras, six miles from San Juan.



Hardy Fruit Garden.

WINTER PRUNING FRUIT TREES.—After this period there need be no further delay in making a commencement in the necessary winter pruning. Most fruit trees require some attention in this respect. It may be little, or it may be much. When trees have to be dealt with after years of neglect, the pruning necessarily is considerable, though in such cases it ought not to be too severe. It will be better to spread the pruning over two seasons. On the other hand, trees and bushes that are annually attended to, and the superfluous wood removed, there will only be a small amount of work demanded each season. Mild open weather should be chosen for pruning operations.

LARGE BUSH TREES.—This form of tree has a short stem, upon which is originated a number of branches rising perpendicularly and at various angles, the whole comprising a shapely bush form. These branches should be disposed at not less than a foot apart, or crowding will most certainly result. The first object, then, in pruning, must be to see that the branches have sufficient room between them. In large, old trees, they will extend many feet. In the restricted bush form each branch will be a cordon, though it may, in order to increase the size of the tree, have been induced to form two or more branches, these also having been treated as cordons. The multiplication of branches in this manner often causes crowding. Let none remain nearer than a foot. The branches, being cordons, are furnished with spurs, and even when the branches themselves are not too close, the spurs may have become unduly elongated. This is especially injurious, as one spur shades another. The winter pruning should, therefore, always include attention to the reducing of long spurs. The nearer the fruiting spurs can be kept to the main branch the better. Restricted bush trees need summer pruning, and if this has been carried out, the pruning now consists in shortening the arrested summer growths to one or two buds. The leading shoot of branches may, if extension is no further needed, be shortened closely, but if a further length is required, shorten only one-third.

Some bush trees are allowed to grow in a freer manner. The heads of these trees must be kept open, and the branches thinly disposed, no further pruning being necessary.

PYRAMID TREES.—Pears are the chief fruits adapted for this method of training. Principal branches may be disposed to form the framework, the lowest being the longest. The growths from the spurs originated on these should be shortened to one or two buds annually, aiming to keep the spurs closely to the main branch. When pyramid trees become crowded, some of the forks or divisions must be removed, but with proper management this should not occur. With this form of fruit tree root-pruning frequently is found necessary.

CORDONS.—Upright and diagonal cordons on walls and espalier fences are profitable and interesting methods of growing Apples and Pears. Trees possessing several cordon branches are readily obtainable, also single cordons. The branches must not be less than a foot apart, but 15 in. is better. Until the requisite branch extension has been made, the leading shoot need not be shortened, but the side growths may be pruned to two buds. Summer pruning is a great help to maintaining fruitful spurs, and ought not, with these trees, to be omitted, as the restriction afforded then concentrates the sap in the lower buds, which at the winter pruning are far advanced towards fruit buds.

STANDARDS.—If standard fruit trees are given plenty of room, they are usually prolific, and especially so when the growths are not allowed to become crowded during any period of the trees' existence. The shortening of growths is to be deprecated in these trees, because doing so produces a lot of spray. Where it is necessary to remove branches, let them be cut out at their origin; in fact, thinning is the best form of pruning standard trees. Specimens that have been neglected some time, and require more than an ordinary amount of attention in the removal of crowded wood, should be dealt with gradually. The great point must be to relieve the centre, as when that is choked, light and air cannot pass through the trees as they ought.

HORIZONTALLY TRAINED TREES.—Pears, Plums, and sweet Cherries succeed well on walls on this form of tree, but Plums and Apples, when trained in this manner, do better as espaliers in the open. In the formation of the trees, side growths at proper distances apart are obtained annually by shortening the leading shoot. Encourage the growth of the lowest tier to advance in front of the higher, and do not originate them closer

together than 12 in. Old established trees in this form may be fruitless, owing to a crowded condition of the branches or spurs. If so, every other one of the former ought to be removed, and a general thinning out made of the clumps of spurs. Each branch, of course, is a simple cordon, and the winter pruning consists in shortening the side shoots to two buds, removing weak or superfluous growths, and shortening spurs of undue length.

FAN-TRAINED TREES.—This is one of the simplest and best methods of training trees on walls, and is amenable to Pears, Plums, Cherries, Peaches, Nectarines, and Apricots. With Pears the branches are mostly spur-pruned. With Plums young growths are laid in, in addition to branches furnished with spurs, while Morello Cherries, Peaches, and Nectarines have the space annually furnished with young wood, and the growths for which room cannot be found may be shortened to a few buds, which will eventually form spurs of a fruiting character. It is, however, unwise to encourage more of these than can be accommodated.—LYMINGTON, HANTS.

Fruit Forcing.

VINES—HOUSES STARTED IN NOVEMBER.—Whether the Vines are in pots or planted out in inside borders, the temperature will need to be increased to 60 degrees at night after the buds break, and gradually increasing it to 65 degrees when the Vines are in leaf, and 70 degrees to 75 degrees by day. Ventilation should be given at 70 degrees, just a little to ensure a change of atmosphere, increasing it with the sun heat, having it rather free at 75 degrees, and above that temperature, for it is important that the foliage be well formed and solidified. Avoid, however, cold and drying currents of air, as that cripples the foliage, stunting the growth. Sprinkle the Vines in the afternoon of fine days, and damp the floor twice a day according to external influences, avoiding a saturated atmosphere on the one hand, and a dry one on the other. If there be evaporation troughs, charge them, and once charged, avoid allowing to become dry. The clear drainings of stables and cow byres answer for the purpose when diluted with five times their bulk of water, but avoid those from pigstyes. Peruvian guano, 1 oz. to a gallon of water, is suitable for filling the troughs, also for watering Vines in pots or planted out, the liquid being applied at the mean temperature of the house. Disbudding must not be practised until the bunches show in the points of the shoots, but the Vines should be tied in position as soon as growth has well commenced, and before the shoots are so long as to be liable to be damaged in the operation. Vines to afford Grapes by the middle of May must be started by the middle of December. Prune midseason varieties directly the leaves have fallen.

EARLY MUSCAT HOUSES.—Where Muscat of Alexandria Grapes are required ripe at the end of May or early in June, the Vines must be started early in December. The Vines must have the roots wholly inside, and should be brought into a moist, but not very wet condition. The temperature should range from 55 degrees to 60 degrees at night, 65 degrees to 70 degrees by day, the lower heat representing the severe, and the higher the mild weather rate. These temperatures should be maintained until the buds break, when the heat will need to be gradually raised, so as to have it 65 degrees to 70 degrees at night, by the time the Vines come into leaf, 70 degrees to 75 degrees by day in dull weather, and 85 degrees to 90 degrees from sun heat, the house being thus well heated, and means provided for admitting air, without causing cold currents.

LATE HOUSES.—Take every possible precaution against damp. Drip is fatal to late Grapes, a single drop getting inside a bunch being sufficient to spoil it, as the decay rapidly spreads. Drip is often caused by keeping the house closed and the pipes cold, so that moisture condenses on the glass, and falls from the rafters or sashbars on to the Grapes. This is common where early ventilation is neglected on fine days, the moisture being condensed on the berries. A little air and gentle warmth in the pipes dissipates the moisture and prevents decay in the berries, but too much heat and too dry air causes the Grapes to shrivel. Seek, therefore, a cool, dry, and equable temperature, 40 degrees to 45 degrees being sufficient, keeping the house closed in damp weather, and when clear admit air freely. Remove all leaves as they become ripe, avoiding sweeping, as dust greatly impairs the appearance of the Grapes.—ST. ALBANS.

A Great Apple Orchard.

In that region of royalty in the fruit line, Kansas, Ex-Governor Morrill has orchards in the southern part of Leavenworth County. Counting 27,000 trees he set out last April, there are 64,000 trees on 800 acres, a compact area of land, making it perhaps the largest single Apple orchard in America, or in the world. Mr. Morrill bought 880 acres of land three years ago and began planting. The severe winter of two years ago destroyed 20,000 young trees. The trees are planted 80 to the acre. There are 12,000 Jonathans, which are considered the best Apples for that country.

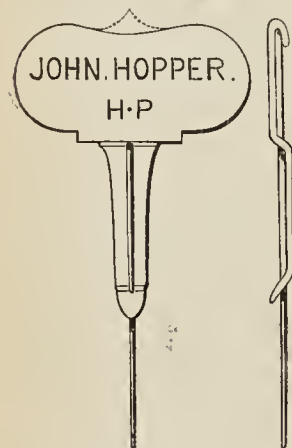


•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matter discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

"THE FRUIT MANUAL" (G. Waters).—You should advertise for a copy of this book, which, as you know, is now out of print. When another issue will be undertaken has not been decided.

BOOK OF FLOWER GARDENING DESIGNS (P. K.).—We have overlooked your former query. The book best suited to your requirements, though perhaps not quite up to date, containing many carpet bedding designs, is the one named "The Royal Parks and Gardens of London," price 2s. 6d. post free, to be had from this office. This book is serviceable to all who have beds to lay out on turf.

ZINC AND "ACME" LABELS (W. M.).—We furnish illustrations of two kinds of labels, (1) the Acme, for trees and large subjects where a bold name is desired; and (2) the zinc label, with patent fastener suitable for Roses. In Pinches' Acme Tree label, the following advantages are claimed: First, the letters are composed of a non-oxidisable alloy, amalgamated with the surface of hard rolled zinc. Second, the names stand out clearly, the letters being half an inch high, light on a black ground. Third, there is no raised border, thus the water runs off freely. Fourth, the "Acme" is half the weight of most other labels, without diminution of strength. Our illustration shows the character of the label better than long descriptions can convey. The stem is a foot long, the lower half galvanised, and 1 inch wide; the plate on which the name is, is 5in by 2½in. To support the zinc



ZINC LABELS.

labels, holes are pierced in the stems, and the wire passed through them as shown in the figure. The top-end of the wire is beaten flat, and the pointed piece standing in the centre of the label pressed down over it. The wire should be about a foot long, and passed into the ground till the base of the label just enters the surface.

VINES NOT THRIVING (York).—We think that there is something pernicious in the soil, and that the border is quite rich enough. The indifferent colouring of the berries would indicate that the border is a little too rich rather than that it is not sufficiently so; or the unthriving state may be caused through an insufficiency of air, and the Vines carrying too heavy a crop. The reason of the soil being obnoxious to the roots is, that it is strong dark soil. It ought to have been sound light-coloured loam, the top spit of a pasture being best. To it were added one cartload of rotten manure to every four of soil; a cartload of brick and lime rubbish from an old building to every three of soil would have been better especially with dark strong soil. The crushed bones are good, and that was all we would have enriched the border with at the time of making, for the rotten manure could not retain its fertilising properties longer than a couple of years, and then they are gone, and a close soap-like mass, in which Vine roots do not like to run, is left behind. We presume the border is drained with rough stones to the depth of a foot, and that there is a drain along the border, and having an outlet, to take away the superfluous water. This being the case, and you being satisfied that the border is not a close, wet, soapy mass, but free and open, we would cover the outside border now with a few inches of litter to protect any roots that may be near the surface, and in February or March we would spread over the inside border 3in of partially decomposed short manure, and any nutrient the latter contains will be washed down to the roots with the waterings. We would also place from 6in to 9in of littersy manure on the outside border at the same time, and any enriching matter that it may contain will be washed down to the roots by the rains that occur between then and June, when the litter may be removed, but the covering on the inside must be allowed to remain. This, if the border is not rich enough, will do much to give the berries size, thinning them well when smaller

rather than larger than Peas being another essential to obtaining large berries. Taking a moderate rather than a large crop, will do much towards securing proper colouring if accompanied by free air daily, and a little at night when the berries are colouring. On the other hand, if the border is wet and close, and the roots running badly in consequence of its not being drained, we can only recommend you to take up the Vines and make a fresh border, but you must draw your own conclusions as to that, as we can only form an opinion from the data furnished.

DAHLIA BOOKS (W. R.).—Mr. Chas. E. Wilkins has favoured us with the following titles of books on the culture of the Dahlia. The latter work you will find as cheap and useful as any. "Practical Observations on the Culture of the Dahlia," by Chas. Turner (Chalvey, near Windsor). "The Dahlia: its Culture, Uses, and History," George W. Johnson and Chas. Turner (London, 1847). "Garden Favourites. The Dahlia: its History, &c," Shirley Hibberd (London, 1857). "The Dahlia: its History and Cultivation," edited by Wm. Cuthbertson, Rothesay, N.B. (London, 1897).

COATING FOR HOT-WATER PIPES (C. K.).—Before laying the pipes we coat them with black paint, composed of lamp-black and boiled linseed oil sufficient to be of the consistency of thin paint. This is applied with a brush, working it in well, so that every part of the iron may be covered, and it is allowed to become thoroughly dry before the pipes are fixed or jointed together. When the boiler is first set to work and the pipes as hot as they can be made, we give another coat with the same



ACME TREE LABEL.

composition as thick as it can be put on, as it becomes much thinner when applied to the pipes. The oil paint applied on a hot surface finds the bottom of the uneven surface of the iron, and the heat being kept up until the paint is dry, it will last a long time without the iron rusting. We have it good at the end of ten years, and when it gives way we repaint the pipes as before whilst hot. Applying the paint to the pipes whilst hot creates an intolerable smell, and is not good for vegetation. The painting should therefore be done when the house is unoccupied by plants, and air being given the operator will be enabled to paint the pipes while hot, otherwise it is pernicious to breathe the atmosphere. If the pipes are not painted whilst hot, the paint is apt to peel off, but by heating the pipes they are made thoroughly dry, and the paint runs to the bottom of every hole or crevice; besides, though there is a strong smell it is gone all at once. This is our mode of painting pipes in cool dry houses—as stoves and greenhouses. We have another for pipes in moist houses, it is the best for any description of iron exposed to wet, and we only name the preceding, as it is a practice we followed successfully before we were aware of the latter, which is to coat the pipes whilst hot with genuine red lead paint. This is the best coating for ironwork of any description that we have tried, and we therefore recommend it in preference to black paint, or any paint that has nothing anti-corrosive in it except oil. Years ago we removed about 400ft of 4in hot-water piping that had been down thirty years, and exteriorally they were as good as when put down, and this with a good coat of white lead paint. They had not been painted during that period. Whether white lead years ago was different from that which is now sold we cannot say, but it is certain that it will not at the present day preserve hot-water pipes from rust for half that period. Red lead paint, then, is what we recommend, and it should be put on whilst the pipes are hot, or they ought to be heated immediately afterwards and kept hot until dry, all

plants being taken out of the house. Coating with gas tar is death to all vegetation if the pipes ever become hot, and the "blacking" of the foundryman is worse than useless, it is deceiving. For iron in or out of water, nothing is better for cheapness and efficiency than three good coats in the former case, and two in the latter.

NAMES OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Tho. Suaney).—Apple American Mother. (M. E. P.).—Grape Madresfield Court. (B.).—Apple New Hawthornden.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Y. B.).—1, Symphoricarpos racemosus; 2, good form of Cyrtopodium insigne; 3, late flower of the double Colechicum autumnale. (N. Telford).—1, Cattleya Warscewiczii; 2, C. labiata; 3, Cestrum aurantiacum. (F.).—1, Begonia President Carnot; the flowers are usually much deeper in colour; 2, Begonia Haageana. (L. M.).—Eriobotrya japonica, the Loquat; a fruiting branch was figured in *Journal of Horticulture*, November 7th, page 423.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Covent Garden Market.—November 27th.

Average Wholesale Prices.—Plants in Pots.

			s. d.	s. d.				s. d.	s. d.		
Aralias, doz.	5	0 to 12	0	Ferns, var, doz. ...	...	4	0 to 18	0	
Araucaria, doz.	12	0	30	0	Ferns, small, 100... ..	10	0	16	0
Aspidistra, doz.	18	0	36	0	Ficus elastica, doz. ...	9	0	12	0
Chrysanthemums, doz.	6	0	30	0	Foliage plants, var, each	1	0	5	0
Crotons, doz.	18	0	30	0	Lycopodiums, doz. ...	3	0	0	0
Cyclamen, doz.	10	0	12	0	Marguerite Daisy, doz.	6	0	8	0
Draeæna, var., doz.	12	0	30	0	Myrtles, doz. ...	6	0	9	0
Draeæna, viridis, doz.	9	0	18	0	Palms, in var., doz. ...	15	0	30	0
Eriæa gracilis, doz.	10	0	12	0	„ specimens	21	0	63	0
„ eaffra, doz.	15	0	18	0	Primulas	3	0	4	0
„ hyemalis	9	0	15	0	Shrubs, in pots	4	0	6	0
„ „ alba...	12	0	18	0	Solanums	8	0	10	0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.	
Arums, doz.	5	0 to 6	0	Lilium l. rubrum ...	1 6 to 2 0	
Asparagus, Fern, bnch.	1	0	2 0	Lilium longiflorum ...	4 0	5 0
Bouvardia, white, doz. bunches...	5	0	6 0	Lily of the Valley, 12 bnchs	12 0	18 0
Bouvardia, coloured, doz. bunches...	5	0	6 0	Maidenhair Fern, doz. bnchs.	4 0	6 0
Camellias, white...	3	0	0 0	Marguerites, white, doz. bnchs.	2 0	4 0
Carnations, 12 blooms	1	3	1 9	„ yellow, doz. bnchs.	0 6	1 0
Cattleyas, doz.	8	0	12 0	Odontoglossums	5 0	6 0
Chrysanthemums, specimen blooms, doz.	1	0	4 0	Primula, double white, doz. bunches...	5 0	6 0
„ white, doz. bnchs.	4	0	8 0	Roses, Niphetos, white, doz.	1 0	2 0
„ coloured, doz. bnchs	3	0	8 0	„ pink, doz.	2 0	4 0
Cypripediums, doz. ...	3	0	4 0	„ yellow, doz. (Perles)	1 6	2 0
Eucharis, doz.	4	0	5 0	„ red, doz.	0 0	0 0
Gardenias, doz.	2	6	3 0	Smilax, bnch	1 0	2 0
Geranium, scarlet, doz. bnchs.	4	0	5 0	Stephanotis, doz. ...	0 0	0 0
Hyacinth, Roman, doz. bunches...	8	0	9 0	Tuberose, gross	3 0	4 0
Lilium lancifolium alb.	2	0	2 6	Violets, single, doz ...	1 6	2 6
				„ double, doz.	3 0	4 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Leeks, bunch	0 1½	to 0 2
„ Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz	1 0	1 3
Batavia, doz.	2 0	0 0	Mushrooms, forced, lb.	10	1 0
Beans, French, per lb.	0 8	0 9	Mustard & Cress, pnnt.	0 2	0 0
Beet, red, doz.	0 6	0 0	Parsley, doz. bnchs ...	2 0	3 0
Brussels Sprouts, ½ sieve	2 0	2 3	Potatoes, English, ewt.	3 0	4 0
Cabbages, tally	1 6	3 0	Radishes, doz.	0 9	1 6
Carrots, doz. bnch. ...	2 0	2 6	Shallots, lb.	0 2	0 3
Cauliflower, tally ...	4 0	6 0	Spinach, bush.	2 0	3 0
Corn Salad, strike ...	1 0	1 3	Tomatoes, English, lb.	0 4	0 5
Cucumbers, doz.	4 0	5 0	„ Canary consigtnt.	4 0	5 0
Endive, doz.	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch	0 2	0 0	Watercress, doz.	0 6	0 8
Horseradish, bunch ...	1 0	0 0			

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, ease	24 0	to 30 0
„ dessert	3 0	6 0	Oranges, per c/s	4 0	16 0
Bananas	8 0	12 0	Pears, English, ½ sieve	6 0	8 0
Figs, green, doz....	0 0	0 0	Pears, French, crate...	4 0	9 0
Grapes, Alicante, lb....	0 9	1 0	Pines, St. Michael's,		
„ Colman	0 8	1 6	each	2 6	4 6
„ Hamburgh	0 0	0 0	Plums, ½ sieve	0 0	0 0
„ Muscat	1 6	2 6	Walnuts, ½ sieve	2 0	3 0



"By Order of the Board."

How very familiar this phrase is! We constantly hear it; daily, almost, we see it in the papers. We are beset by Boards behind and before—shall we say trammelled by their rules and regulations? We ought rather to say protected by them from ourselves and our foolish actions. What constitutes the Board? A body of men chosen from their fellows on account of their good business habits, their evenness of mind, and their general superior knowledge. These men do the small legislating for the country, and we must admit on the whole they do it very well.

Well, what is the "Board," of which we now would speak, and in what way do their orders concern us? This time it is the Board that sits at Whitehall and deliberates on things agricultural. It is harassed (and rightly so) on the subject of the prevalence of swine fever, and has issued a leaflet directing the attention of all who own or deal in pigs to several things of vital importance. Swine fever, like the poor, seems to be always with us. Somehow or other we are never clear. We do get rid of "pleuro," of foot and mouth disease, of rabies; but there are several complaints that never quite disappear—dirt complaints we might call them. The two that we hear of most are "scab" in sheep and "fever" in pigs. One of the reasons may be this: Scab does not kill outright, and therefore is neglected; the disease gets a firm hold, and, being terribly infectious, may hang about fences and premises for an indefinite length of time.

As to swine fever—well, we hardly dare go as far as Mr. Hanbury, and lay so much blame upon the "vet." He intimates that there is a great lack of knowledge as to this disease on the part of our medical practitioners. Has Mr. Hanbury ever tried to doctor a pig? It is a funny animal to deal with, and this particular disease often lacks very marked symptoms. The great difficulty is to be found in the ignorance of the pig owner. He is very reluctant to admit there is anything more amiss with his property than a simple homely remedy won't set right. If a pig should chance to die it is far the best and safest way to give it a midnight funeral, and to sell with the least delay the rest of its mates. He does not believe in a "post-mortem"; he does not want to know the cause of death. Inspectors are not desirable acquaintances when at hand, and have a trick of stopping a poor pig jobber from pursuing his legitimate calling.

Of course, the cause of death may not have been fever; but the chances are that it is. The rest of the herd are carefully distributed about the country, and become fresh centres of activity. All this sort of thing the Board wants to stop. A clean bill of health for pigs would be a grand thing. Here we are with food enough and to spare—Potatoes in esse and in posse, likely to be ridiculously cheap and good barley meal or other feeding stuffs equally cheap; yet big strong pigs cannot be got for money, let alone love. Green bacon rising every day, and the bye-products too.

Restrictions are blamed for the scarcity, but swine fever is so rife that there must be restrictions, and pretty severe ones too. As in the case of some milk cows, pigs are fattened and killed off earlier than they used to be, before they have had time and opportunity for much reproduction. We fancy the taste for pork is on the increase; certainly the shons abound on all sides. At one time a joint of pork was cheaper than a similar weight of beef or mutton. It was more tasty, and therefore more popular. Now, though the

prices are more approximate, the taste for the pork joint has been acquired and sticks.

We think we could not do better than give in a shortened form the suggestions and recommendations contained in the leaflet before us:—

I.—There must be co-operation between the farmers, pig dealers, and the Government officials. That is, if the disease is to be stamped out.

II.—It is well to remember that swine fever is never spontaneous in its origin. There must be a "first cause" somewhere, either contact with a diseased pig or, even as in typhoid, with the excreta.

III.—Infection is carried from centre to centre by persons who have been engaged on or about ailing pigs.

IV.—Clean sties and suitable food serve to keep pigs in healthy condition, and thus enable them to resist disease.

V.—The proper disinfection of all carts, crates, nets, ropes, &c., used in the conveyance of swine.

VI.—The necessity of a fortnight's quarantine for newly purchased pigs before allowing them to associate with the home stock.

VII.—Don't disseminate disease by moving pigs from any premises where there is any sign of disease.

VIII.—The Diseases of Animals Act makes it obligatory on the owner or caretaker to separate infected animals at once from those free from disease. On no account should the same person attend to the sick and healthy.

IX.—Prompt notification of suspicious symptoms to the police constable.

X.—The Board only pay compensation for swine slaughtered by their instructions, and the slaughter is ordered in the interests of the public alone in cases in which it is considered by the Board to be necessary in order to prevent the spread of the disease. Compensation is never paid merely with the view to indemnify the pig owner for the loss sustained by him by reason of the outbreak of disease amongst his swine.

XI.—Although swine may not be moved alive from an infected place, there is nothing to hinder the removal of a sound carcase with a written permission of an inspector of the local authority.

Some of these clauses require a little comment. The first we touched upon—viz., co-operation of pig owners with the local authority. The second clause goes to prove that this malady is an entirely preventible one, and therefore it is a great blot on our management these continual outbreaks of a serious, and to the nation costly disease. It is not like rinderpest or anthrax, that comes without warning and takes the healthy and sanitary as well as the low-conditioned and dirty.

Regarding the third clause we are strongly reminded of the great rinderpest visitation. At that time it was proved beyond doubt that the fatal seeds were carried from farm to farm by (I.) persons on business, (II.) persons who came merely out of curiosity, and (III.) by dogs. There can never be too much care exercised in cases where there is the slightest doubt. In an affected district, allow on no pretence whatever the visits of strangers to the piggeries. If the visits of a farrier or vet. are necessary, see (if they are not alive to it themselves) that they are well disinfected before they begin their work of examination. Nailed boots easily convey germs, as do dirty hands and clothes. An overall well impregnated with carbolic, or other disinfectant, should be worn.

As to No. IV., we are always preaching cleanliness in season and out, and it has been our endeavour to point out the economy of good wholesome food, not only for pigs, but for all stock. We are perfectly certain as regards No. V. that carts, crates, &c., will not disinfect themselves, and the question arises, Are there enough inspectors about to see the work effectually carried out? VI.—A precaution of this sort always pays. VII. This is an instance of love and regard to one's neighbour. This love and regard for his interest must be made compulsory. VIII. and IX.—Separation and notification. Well, this is not done as promptly as it should be. The symptoms of the disease are often obscure, and the Englishman hates any officialism. Can this be because the official is often very officious and scant of courtesy? X.—We almost wish slaughter were the rule. It would, we think, be the most certain method of really "stamping out." Slaughter and quicklime, the cost would be heavy, but the result (if properly done) would more than repay the cost. We fear there are cases where pigs are supposed to recover, only to remain active agents for dis-

semination of disease. We know these views of ours are not allowed in high places, but we think the result would more than justify the outlay. After all, valuable as he is as a food product, it does not take many sovereigns to cover his cost.

Work on the Home Farm.

The rain, which lasted nearly three days, and totalled altogether a fall of about 5in, ceased very suddenly, and was succeeded by three nights of frost, more severe than we can recall under similar conditions. After 10 degrees to 16 degrees of frost for three nights, ice 2in in thickness was formed, so it may be readily imagined that root crops have suffered considerable damage. The soil, being in a saturated state, was frozen to a depth of 3in, and though the frost went as suddenly as it came, we fear the full extent of the damage will take some time to fully display itself. Swede storing is indefinitely postponed, for it would be useless to spend money on damaged roots which would not keep. We must wait until we can distinguish sound from bad ones. We hope no one had any Mangold left out, for they must have suffered severely.

Potato heaps unsoiled have been frozen, notwithstanding good and usually sufficient coverings of straw, in one case at least 3ft in thickness. Potatoes are being marketed very freely, and in most cases our report is as last week, very good; but there are sinister accounts from a neighbouring and very important district, at least one half of the crop on some farms having gone bad since it was taken up. Disasters of this kind again raise hopes of better prices in the future, but they will have to be multiplied many fold before supplies are seriously affected.

What with rain and frost, work on the land has been entirely suspended, and the horses not engaged in delivery of produce are having a rest. They are still receiving the full allowance of Corn, as well as the crushed linseed for the water tub, which latter is very necessary when they are on dry food.

The stress of autumn work being over is having at last the natural effect of easing the labour market. A fortnight ago men were difficult to obtain; to-day the supply exceeds the demand, and at the Martinmas hirings there is a distinct tendency towards lower wages. We know also of several instances of men returning from the towns with the intention also of staying in the country if they can secure employment. Farmers will be very thankful for a change in this respect, for the labour trouble has been enough to make many despair as to the future. High winds have made the hedger's work difficult, and have blown about the light brush, making it difficult to collect. We do our best, and hope there may be no punctures for cyclists. If there are, they must blame the wind.

WHEAT IN KANSAS.—Kansas is now the banner Wheat producing State. This year over 5,000,000 acres of land were sown in Wheat, and the crop now being harvested is estimated at from 80,000,000 to 90,000,000 bushels, which will give the farmers 50,000,000 dollars, or 500 dollars to every farmer in the State. Last year the crop was 76,000,000 bushels, and the year before 50,000,000. Next year even more land will be planted in Wheat.

AGRICULTURE ALONG THE YUKON.—The outlook for gardening and some agriculture in the cold interior region of Alaska, along the Yukon, is made quite encouraging by official reports recently received at the U.S. Department of Agriculture at Washington. Professor C. C. Georgeson, who is in charge of the Alaska experiment stations, has spent the summer in the interior and along the Yukon Valley, visiting the experiment station established by the Department of Agriculture last year at Rampart, just outside the Arctic Circle, and other points where experiments were arranged for. Good gardens were found all along the route, especially at Eagle City and Holy Cross Mission. Although the season was unusually late this year, new Potatoes, Cabbage, Cauliflower, Beets and other vegetables were ready for the table before the middle of August, and Lettuce, Radishes, and Turnips, grown in the open, have been in use for some weeks. Flower gardens, containing a large variety of annuals grown from seed furnished last year, were in full bloom. At the station at Rampart, Rye seeded the previous fall wintered perfectly, and was ripe in July. Spring-seeded Barley had ripened about the middle of August, and there was quite a prospect for Oats and Wheat to mature. Extensive areas of excellent land were found on the Lower Yukon, upon which there was an abundant and often luxuriant growth of grasses over 6ft in height. The abundant moisture and long days during the summer months account for the surprising luxuriance of vegetation in the far north region. One of Professor Georgeson's assistants will make a trip overland from the Yukon Valley to Prince William Sound, taking the trail from Eagle City. This will afford opportunity for a reconnaissance of that region, which is reported to contain large tracts of land well suited to agriculture. **Report of this trip, and of the season's operations of the Alaska stations as a whole, will be submitted to Congress in the early winter.**



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Journal of Horticulture

THURSDAY, DECEMBER 5, 1901.

Size in Fruits and Vegetables.

HERE is a wonderful fascination about a big Apple or a mighty Onion. The grower feels it to begin with, and when the massive Peasgood's Nonesuch, or the bulb of Ailsa Craig that turns the scale at over 2 lbs., appear on the exhibition board, they never fail to attract the admiration of the crowd. And in these days size is a great consideration on the show table. At the Crystal Palace a few weeks ago big Apples were in the majority, and the people who feasted their eyes on them did so with the feeling that they were grown expressly to be looked at and not for consumption. In a way this is as it should be. Garden produce of all kinds is exhibited as being illustrative of the grower's skill, and the fruit or vegetable possessing possibilities as to size always enjoys an increased popularity on this account. Fruits and vegetables are grown for exhibition for the purpose of showing what can be done with them; but in the ordinary workaday world is the giant Apple or the massive Onion regarded as highly as specimens of average proportions?

Perhaps the man who grows for sale can answer this question better than anybody, because he has to cater for the million, who only buy in small quantities, with a desire to make the most of their purchases. It is all very well to grow big Apples, but when the average housewife orders a pound and gets one specimen, she generally draws out of the bargain, and makes her purchase from another stock of medium-sized examples of which she gets a number to make up the desired weight. But, on the other hand, I am no advocate of the small scrubby fruits, with neither pretensions to size nor quality, that do so much to flood the markets, and the wise purchaser

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

does well to steer clear of them. Nor do I contend that a large Apple is not necessarily a good one, but the duty of the grower is obviously to cater for his customers; and if they prefer articles of moderate size, this is the strongest of all arguments why he should provide them, even though the biggest may be considered the best at the show.

By the way of further illustration, let us take the popular Tomato. If two dishes are placed side by side on the exhibition table, the specimens in one weighing, say, a pound each, and those in the other about 6oz or 8oz, the prize will be almost certain to go to the former. But if these two dishes are placed in a shop for sale, the smallest will be first to find a customer. The man in the street doesn't like to pay sixpence a pound for his Tomatoes, and only get one. He prefers five or six for his money, and while they are equally as good, they are more economical. For this reason the varieties most preferred by market growers are those which produce regular crops of even, medium sized fruits rather than giant specimens that the amateur might gloat over, and the judge give first prize to.

The other day I had reason to congratulate a grower on some very fine Carrots that he staged at a show. They were large, long, symmetrical roots that had been obtained at considerable trouble by adopting a special method of treatment. They easily won the first prize, and were an object of admiration for the spectators. "They're very good," remarked the grower; "but these are the sort to pay," and he drew from his basket a short, weighty little specimen of a Horn Carrot. He went on to explain that it was no use offering show Carrots to his customers, as they would not look at them so long as they could get moderate sized specimens which counted up in the way of numbers. Potatoes offer another illustration of the same thing. The green-grocer may put a few samples of giant Up-to-dates in his window by the way of attraction, but he sells from the bag inside, which is filled with specimens not more than half the size. And we must give the public credit for knowing a good article. Nothing is better than the average sized tuber that can be boiled without cutting, even though it may have to come second on the show board to specimens half as big again.

It is rather curious that in most cases where big Onions are grown, there are two beds, one for the giants, and one for the ordinary crop. The chief interest of the grower may be wrapped up in the former, and one can quite understand it, as there is a great fascination about harvesting 2lb bulbs. But if specimens like the latter can be grown, why have the other bed? That is to meet the requirements of the cook who objects to cutting steaks from her Onions, and prefers smaller ones. Perhaps she wants educating up to the modern Onion of great size, but in this respect she is not unlike the average house wife when she lays out her coppers for a pound or two of Onions, she wants one for use to-day, and another to-morrow, and prefers this to cutting a bit off a monster to flavour the stew, and putting the remainder away till it is required. There are not many who will not agree with her preference.

Exhibitions are, no doubt, excellent institutions, and have done a great deal towards the improvement of cultivation. By the means of competition growers are stimulated to do their utmost in the production of the finest specimens, as well as the largest, and I have no sympathy with the man who sneers at the huge Chrysanthemum, the massive Onion, or heavy bunch of Grapes, because he cannot produce similar examples. But, after all, consumers form the chief community that growers have to consider, whether in a private or commercial sense. As a rule, the moderate sized article is preferred for home consumption; and while this is so, there must be a distinction between produce grown for show and general use, whether the fault be on the side of judges who favour size, or the consumers who do not.—H.

Bee-Keeping.

It is perhaps too much to say that a garden is incomplete without a hive or two of bees, but there can be no doubt that the gardener would find these "busy little bodies" a useful class of workers, as well as interesting and profitable. Many gentlemen have now an apiary in their garden, and I think the day is not far distant when gardeners in general will be required to have a knowledge of apiculture. The advantages to be gained by having these apiaries in our gardens are many. They flit from flower to flower in search of honey and pollen, and, consequently, fertilise the blooms, and save us the need of using the camel's-hair brush or rabbit's tail. A corner can always be found to place the hive in. It takes up very little room, and amply repays us for any extra attention given by the surplus honey gathered throughout the honey season. Unlike the wasps, bees do not take our fruit.

Bee-keeping of to-day is vastly different to what it was twenty years ago, when only the straw "skep," or hive, was in vogue, and when the barbarous practice of killing the bees to take the honey was the rule. These straw "sleps" of our ancestors are becoming obsolete, thanks to the exertions of the British Bee-Keepers' Association and County Councils, who send lecturers on the subject to most of our agricultural and horticultural shows. Bar-frame hives are now used, by which bees can be examined at will without disturbing them to a great extent. Now, it must not be supposed that bee-keeping can be rushed into headlong. The beginner must—if he is going to succeed—make a study of these ever-busy creatures by visiting some well-appointed apiary, and by reading a good book on the subject. "The British Bee-Keepers' Guide Book" is a capital work, and can be easily understood, written as it is by one of our most successful bee-keepers of to-day, in plain and simple language.

Those commencing bee-keeping should, after procuring a good bar-frame hive, obtain a swarm about the end of May from some good bee-keeper, placing the hive in a sunny part of the garden facing south. The ground round about should be kept free from weeds and long grass. Feeding with syrup should be done for a week or ten days after hiving, according to the strength of the swarm, and this will give them a good start in their new home. Don't attempt to obtain surplus honey until your bees have drawn out their combs and obtained a good supply of stores. For my own part, I should not put on sections or shallow frames till the following season.

Always wear a veil when manipulating. It will give you confidence, which is one of the main points in the successful handling of bees. Do not disturb the bees more than is absolutely necessary, and, while manipulating, do not have your hive uncovered too long. Bees do not like draught, which often causes "chilled brood." Be as careful in handling as you possibly can, for if you hurt one bee you will very soon have several others paying vengeance. Covering up for the winter should be done by the end of September, after ascertaining the condition of the brood-box. The bees should be fed rapidly, so as to ensure a good supply of sealed stores. A good stock of bees should contain at least 30lb of stores, and a good safeguard for the winter (should they get short of food) is to place a cake or two of bee-candy over the hole in the quilt. Condense your combs as much as practicable, removing those not covered by bees. Pack round the sides with sawdust or paper, and a good covering over the frames should then keep them snug and warm during the winter months. Close up the entrance to about 1in, examine them again about the end of February, and give them another cake of candy, in case they are short of stores. About May, when the weather is warmer, place on a section crate with foundation starters, and if your stock is strong, and a good season favours them, you should get 40lb or 50lb of honey for your trouble.

If you want to increase your apiary it can be done by inducing swarming, which they will proceed to do if cramped for space in the hive. They will invariably swarm naturally about June if your stock is at all strong. The gardener has the special advantage of having plenty of flowers from which his bees can obtain honey and pollen, and it will be worth while to sow seeds of such flowers that yield a good supply of these. Crocus combs should be largely planted, as the flowers from these are the first the bees have in the early spring. They are also fond of Nasturtiums, Mignonette, Sweet Peas, Borage, white Clover, and almost every single sweet-scented flower. Good honey will always find a market, the price ranging from 7d. to 1s. per lb. The study of bee life is well worthy of one's time, and from them we should most certainly be able to take a lesson and profit thereby.—H. KITLEY.

Our Vegetable Crops.

Many, no doubt, will have good cause to remember the drought of the past season, and the many pests incidental to it, and, among others, I certainly shall not forget the havoc wrought by grub amongst Brassicas, such as I had never hitherto seen or experienced. At the beginning of the season I was, in regard to this pest, very much in the position of "the man in the street," and, in common with some of our political friends, not possessing "an intelligent anticipation of events," took no preventive or remedial measures until almost too late. Cauliflower and autumn Broccoli were by far the greatest sufferers, nearly all the plants succumbing in the seed bed; but all the members of the family were affected to a greater or less extent. Even Seakale of two or three years' standing died, the inner bark of the stems being completely eaten by the larvæ of the fly, which, in appearance and habits is, if not identical, very similar to the Onion fly. Some of our scientific friends will perhaps pronounce them as being distinct.

The first appearance of anything being wrong with the plants was the drooping of the leaves, and on discovering that the stems were being devoured by grubs, I had the seed bed dusted heavily with lime and soot, but it was too late to have any effect on the growing broods, and eventually practically every plant died in the case of the Cauliflower, as I have previously stated. Even early Cauliflower, which had been wintered in frames, collapsed laid in the rows just as they were beginning to heart in. Fortunately, I had plenty of Peas at the time, and was able to manage without the Cauliflower. Matters were beginning to look serious, so I procured a sufficient number of Cauliflower and autumn Broccoli, and, previous to planting, had the stems puddled in a strong mixture of soot and cow manure, and after planting and watering, dusted heavily around the stems with a mixture of paraffin, soot, lime, and dry wood ashes; but all to no purpose, as although the fly would not deposit the broods on the soil, they laid in the axils of the leaves, and the rocking of the plants by wind would leave sufficient space around the stem for the larvæ, after incubation, to find their way to the base and work upward.

The puddling, too, seemed to affect the plants adversely, the foliage recovering but slowly. I decided to discard it. The piece was again replanted, and after dusting around the stems with the aforementioned mixture, I had the plants syringed twice a week in the evening with a mixture of paraffin, softsoap, and water, using a quarter of a pint of oil with sufficient soap to make an emulsion, dissolving the same with a little hot water, and afterwards adding three or four gallons of soft water. This proved effective, and I lost but few plants after, although they did not thrive well until cooler weather came with the August rains. Almost every Leek died as well, presumably from the same pest; but after planting some obtained from a friend, I had these, too, syringed with the paraffin solution, and lost very few, although I found on examining the soil that eggs were being laid as fast as ever.

At the time I chanced to read an article in a contemporary, treating of grub in Brassicas, in which the writer stated that the grub was a secondary affair, and was the sequel to the putrid condition of the stem, brought about by a real disease; but that most people made the mistake in thinking the grub the primary cause of the death of the plants, and adding that the pest or pests have usually spent themselves by the end of June. However, in my own case the eggs were laid, and incubation took place well on in August. Viewed in this light, is not the case analogous to Finger and Toe in Turnips? If so, perhaps a winter dressing of lime to the ground, which, on first consideration, I thought would be useless, might be of good service in preventing another attack. Apropos of the above theory, I had noticed that on a piece of ground planted with Kale, which had not previously carried Brassicas for many years, not one plant died, and what was more, all thrived, but on the adjoining piece nearly all died. I may say, too, that nearly the whole of the garden has been sadly overdone with the Cabbage family, circumstances compelling it, and perhaps a bad rotation may have had much to do with the virulence of the outbreak, as well as an abnormal season.

In thinking the matter over, too, I remember seeing some early Cauliflower I had pricked out in a frame earlier in the season, showing signs of suffering, and on pulling one

up, found that the stem had perished; but after having the rest dusted with lime and soot, and a little more soil pulled around the stems of the plants, they recovered, but only to die some time after planting out, from grub. At the time they were in the frame—April—I should say the fly would be in the chrysalid state, and consequently would not have started to complete the mischief wrought by disease, if disease it be. I had, at any rate, as a friend remarked, grand lessons in entomology, such, too, as I do not want again; but to be "forewarned" should be "to be fore-armed," and another season I shall be better prepared for the fray.—D.

Manna.

The vexed but exceedingly interesting subject of this curious product, or phenomenon, crops up from time to time, when the reader is invited to assimilate vastly divergent views and statements on its nature or origin. From some little research in the matter the writer has ventured to put together and embody the following notes with the view of elucidating some sort of a truth from the various opinions of travellers who may be held from their actual experiences to have spoken with some considerable show of authority, so that these records "*se non vero*" entirely are for the most part at any rate "*ben trovato*." If there were no differences of opinion, we should have no fancy waistcoats, as the homely saying goes. So, too, we are the richer for the many opposite data urged as to what Manna actually was, or is, and as to whether that of modern or historical times is in any way identical with that of the Bible story.

If we take the probable meaning of the word itself, "the gift of heaven," its special and providential visitation or appearance in the days of the Israelites seems explained. So, too, its other likely definition, the Hebraic "*man hu*" "what is it?" appears to demonstrate its extraordinary occurrence by way of a particular dispensation. Whether, however, the peculiar food which the Wanderers eat with so much early enjoyment bears any similarity to either the Manna mentioned from time to time in history, or the product called by the same name, and cultivated in various countries at the present day, assuredly can never be known with certainty, and it seems an unprofitable problem in many ways to attempt to solve, though it may be stated that there has been more than one eminent authority who was persuaded that it is the self-same identical thing as the minute fungus truffles which spring up in the sand in parts of the desert plains, and form, indeed, part of the staple food of the Bedouins wandering in those districts.

The Manna on Mount Sinai is stated to be a sugary exudation of a bush of the Tamarisk species. We gather from the narrative of the Old Testament, as to what we must term with much show of reason, the miraculous Manna of Moses, many facts which assert the very special circumstances under which it appeared, proving it, in fact, to be a substance very different, apparently, from these sugary exudations, under whatever form or particular conditions the latter have from time to time appeared, or are produced in current times. Thus, then, we learn it came every morning, save on the Sabbath, in the form of a round seed somewhat resembling hoar frost. It was necessary to gather it early, before the sun would melt it, and it must not be laid aside, except specially for the Sabbath, or it bred worms and became foul. It was, moreover, prepared for food by grinding and baking, and its taste was similar to that of fresh oil and honied wafers. The whole nation for forty long years presumably subsisted upon it, and it alone, till suddenly, when the people obtained new Corn from the land of Canaan, lo and behold, it stopped! Thus, both Jews and Christians, and believers in inspired Scriptures, will very reasonably always regard Manna as a miraculous gift of the Omnipotent, and not as a mere product, however occasional, of Nature.

The Oriental productions of the Arabian deserts and other Eastern regions have by no means the same qualities as the above, being medicines rather than food, stimulating rather than nutritious. They were (and are) produced for the most part but in small quantities, and only in certain months, but were capable of being kept for a length of time. The celebrated Arabian physician picturesquely but somewhat mysteriously describes it as a dew which falls on stones or

bushes, and which becomes thick as honey, speedily hardening like grains of Corn. Somewhat corroborating this description is Mrs. Bishop's version of the experience of her researches in Persia. This illustrious traveller states that though at Biltis, Manna is produced chiefly from the Oak, yet it is generally considered as a deposit left by the aromatic exhalations brought by the wind from Arabia, and is credited with appearing on any plant, without regard to its nature, and even upon the garments of man. Very like dew certainly! That the deposit is greatest, moreover, in dry years. Burkhardt, however, I believe, states that the Tamarisk Manna, presently touch upon, comes in wet years, being oft-times in dry seasons altogether lacking. Mrs. Bishop further discovered that besides the white Manna obtained by drying the leaves of shrubs whereon it appears, and allowing the saccharine matter to fall off, and the green product which is the result of steeping the leaves in water, and afterwards straining, there is another kind, somewhat like golden syrup, and used, in fact, for much the same purpose.

Let us glean a point or two further from Burkhardt. He states that Manna drops off from the thorns of the Tamarisk, or Camel Thorn, on to the ground, and, like that of the Bible, has to be gathered early in the day, before the sun melts it. The Arabs, indeed, after cleansing and boiling it, strain it with a cloth, and put it into leathern bottles, to be used as occasion requires, somewhat in the way of butter or honey. Another Persian traveller describes it as a substance as white as snow, while Burkhardt himself, in the Jordan valley, found it as gum on the Gharrob trees. Various other shrubs, too, from India to Syria, have been stated to yield a like matter. As regards the modern Manna of commerce, European or otherwise, and whether from Calabria, Sicily, or Persia, it may be said to be a kind of honey caused by the puncture of an insect to the Tamarisk or other producing tree. Thus, that exuding from the Ash in Sicily is a fluid substance proceeding at night like the dew, but hardening towards morning. And this flowering Ash is largely cultivated in Sicily in somewhat extensive plantations, cuts being made all over the trunk year by year, till the tree is exhausted.

Though but little used in England at the present day, the medicine (a mild aperient) obtained from the saccharine exudation, whether proceeding from the puncture of the insect, or by an artificial incision, has been, and presumably still is, largely employed for such purposes in South America. It is very much a Manna of the above nature that Herodotus probably refers to. What we may term Australian Manna very similarly is found on the Eucalyptus leaves (*Eucalyptus mannifera*), while kindred substances appear on the foliage of Larch, Cistus, and Cedar trees. Of a different character, however, must be reckoned the produce of a leguminous spring plant found in Persia, Afghan, and Baluchistan. This, indeed, is like a small round drop, or globule, of a size varying from a Mustard seed to that of a Coriander, and being of a very sweet taste, a certain amount of which is apparently collected periodically near Kandahar, and imported to India.

And this brings us, in closing, to an incident which was commonly reported about a year ago anent a supposed remarkable phenomenon regarded by many as a special intervention and act of Providence. I allude to a report from the Central Provinces of India during the late grievous famine, that the Bamboos were found to be yielding Manna, and that of a kind never experienced previously, which, when analysed by a Government expert, was found to possess the ingredients of cane sugar, being composed of sugar ash and glucose in almost equal parts, with a minute proportion of water. In any case, this freak, or otherwise, of the Bamboos seems very rare, though a spontaneous intermittent exudation may well have occurred from time to time in bygone times, without having any record left, unless it had happened at similar times of acute distress, when a mention of the event in some form or other would probably have been handed down.—J. A. CARNEGIE-CHEALES.

Queen's Coronation Flower.

Florists, both in the metropolis and the provinces, are making the most elaborate arrangements for the supply of flowers at the approaching Coronation. It is understood in Covent Garden that the flower most in request will be the Lily of the Valley. For many years past Her Majesty the Queen has favoured this delicate flower, and therefore it is considered certain that Coronation Day will produce an enormous demand. Other folks suggest the white and red Roses as Coronation flowers.



The Week's Cultural Notes.

There are several of the *Masdevallias* that, although during the summer months get along very well in the cool house, must in winter be given rather more warmth than is here afforded. When the minimum temperature of the coolest house is kept well up to 50 degrees, these will do very well, but anything below this is dangerous, and they should be removed to the coolest part of the *Cattleya* house if there is no intermediate structure. *M. Backhousiana*, *M. Chimæra*, *M. Shuttleworthi*, and the snowy *M. Tovarensis* are among those that are benefited by the increased warmth in winter.

Especially is this the case with plants that have been recently repotted or basketed, the additional warmth serving to stimulate root action, and thoroughly establishing them in the new pots. The grande and *Insleayi* section of *Odontoglossums*, the *Anguloas*, *Eriopsis*, *Sophrontis grandiflora*, *Maxillaria Sanderiana*, and several of the cool *Oncidiums* are also benefited by this treatment. The room in the cool house made by their removal will be useful for plants of many of the *Dendrobiums* now at rest. Then there are usually plants of such as *Cypripedium insigne*, *C. venustum*, and others that have been growing in frames during the summer that need housing.

The deciduous *Calanthes* must now, of course, be kept quite dry, as it is quite useless watering a plant whose roots are dead or dying. But those of the evergreen species, such as *C. veratrifolia* and its allies, are never really at rest; and although now that the days are shorter and often cold and damp, less water is needed than in summer, nothing like drying off is permissible. With the newer variety, *C. oculata gigantea*, and similar forms, a medium course is best. The roots will often be found alive at potting time in spring, showing that some moisture at least is needed. This, too, is of a semi-evergreen nature.

Although a comparatively dull season, the slackest time for Orchid flowers is past, and from now onwards the houses will gradually assume a brighter appearance. When there is no flowering house the blossoms are apt to damp and quickly lose their beauty, and it is safest to place all flowering plants in one part of the house, damping as little as possible in their immediate vicinity. In a flowering house the risk is the other way about, and the plants, weakened by the strain of flowering, are also apt to suffer from the very dry condition of the atmosphere. It should be possible, without giving sufficient moisture to cause the flowers to damp, to meet their requirements in this way, and a chink of air on the top of the house prevents moisture condensing on the glass, and again falling upon the flowers.—H. R. R.

Lælia albida Mariannæ.

Elegant and attractive as the parent species undoubtedly is, the variety of which we write is much more charming, and the difference of merit lies in the more richly coloured lip of the *Mariannæ*. *L. albida* is, or was, imported in times past in large quantities from the mountains of Mexico, from whence it first came in 1832. The pseudo-bulbs are cheap, and flower freely for a year or two at least. In time, however, they become weakened, and a renewal of the stock is desirable. On page 507 we furnish an illustration of this Orchid, which fully shows its bright appearance. The sepals and petals are white, shaded at the tips with rose, while the lip is purple-tinted. The strap-shaped leaves are leathery and dark green. Flowering in November and December, this fine representative is all the more welcome.

Vanda cærulea.

It is difficult to say why this very lovely Orchid is not generally seen in a satisfactory condition, that is where thought and skill are brought to bear upon its culture. In many instances, no doubt, it is kept far too hot, and in too close an atmosphere. There it can never be satisfactory. High up on the Khasia Hills, where it grows naturally, there is never the sweltering heat of the jungles and valleys, while in winter it is often exposed to frost of greater or less severity. It is unreasonable, then, to expect the plants to keep healthy under hot and very moist conditions. In a moderately heated and well ventilated structure they are more likely to do well, and a moist greenhouse, or a vinery or Peach house at work, is often a more satisfactory home for them than the Orchid house proper. The roots of *Vanda cærulea*, unlike those of some other *Vandas*, delight in being closely packed together in small receptacles; growing one over the other, and overflowing, as it were, into the congenial atmosphere of the house, they conduce to that hard and solid growth so necessary under cultivation; and the plants

will be more free flowering, longer-lived, and generally more satisfactory than in heat. Because a plant is an Orchid from tropical latitudes it does not follow that a stewing heat is necessary for it.—H. R. R.

John Evelyn and London "Smoak."

The Londoner of to-day who should find himself set down suddenly in the city of Milton and Pepys and Evelyn, would certainly discover a considerable change in his surroundings; but he would at once note the presence of one familiar fea-

Paris was his model, Paris which was so much more symmetrical than London, so much more civil, so much more sanitary. The great gardener's orderly mind revolted at "the congestion of misshapen and extravagant houses, the narrow and incommensurate streets, the ill and uneasy form of paving, the troublesome and malicious disposure of the spouts and gutters overhead," and at "the churches, dammed up with pews, every three or four of the inhabitants sitting in narrow pounds by themselves." But most of all he deplored in language which may be commended to the Smoke Abatement League, "the hellish and dismal cloud of seacoal which is perpetually imminent over this august and opulent city," making it "rather resemble the suburbs of hell than an



LELIA ALBIDA MARIANÆ. (FLOWERS, NATURAL SIZE. SEE PAGE 506.).

ture. Two hundred and fifty years ago London was smaller, more picturesque, and in a sense, perhaps, more splendid than it is now, but it was not less grimy; and the smoke of the city was as vexatious a problem then as it is at the present hour.

The question is laid before us with much vigour and conviction by John Evelyn in the pamphlet called "Fumifugium," which was published by the King's command in 1661, five years before the Great Fire swept the narrow insanitary streets, accomplishing its cleansing work with awful completeness. Evelyn was not a true lover of London. He fully admits the grandeur of its situation, but he never justly appreciated the beauty of the city (in which, he says, he had "neither habitation, office, or being") which won from no less ardent lover of solitude than himself an undying garland.

assembly of rational creatures and the imperial seat of our incomparable monarch . . . so that the weary traveller at many miles distance sooner smells than sees the city to which he repairs. . . . At least, let the continual sojourn of our illustrious Charles, who is the very breath of our nostrils, in whose health all our happiness consists, be precious in our eyes, and make our noble patriots now assembled in Parliament consult for the speedy removal of this universal grievance."

The illustrious Charles, whose triumphant return to his capital Evelyn had lately witnessed—"I stood in the Strand," he says, "and saw it, and bless'd God"—interested himself very warmly in the subject of Evelyn's tract. During a sailing match from Greenwich to Gravesend and back between two yachts belonging to the King and the

Duke of York, His Majesty "was pleased" says Evelyn, "to discourse to me about my book, inveighing against the nuisance of the smook of London and proposing expedients how it might be reformed; commanding me to prepare a Bill against the next session of Parliament, being, as he said, resolv'd to have something done in it." In this gracious encouragement Evelyn saw in no mere metaphorical sense the dawning of a brighter day for London. "With a Prince who is resolv'd to be the father of his people, and a Parliament whose decrees and sentiments take their impression from His Majesty's great genius which studies only the publick good," the enthusiastic Royalist saw no reason why London should not be made "one of the sweetest and most delicious habitations in the world, and this with little or no expence." A hundred years later Fortune's wheel had turned for the House of Stuart, and a new edition of the "Fumifugium" ascribes the failure of Evelyn's schemes to his having had the misfortune to recommend a work of such consequence to "so negligent and dissipated a patron."

Resisting the temptation to descant "upon the nature of smoaks," Evelyn goes straight to the heart of his subject. "It is certain," says he, "that it is the immoderate use of and indulgence to sea coale alone in the City of London which exposes it to one of the fowlest inconveniences and reproches that can possibly befall so noble a city"; and he reminds his readers that during the siege of Newcastle, when there was a dearth of coal, "divers gardens and orchards planted even in the very heart of London, as . . . my Lord Bridgewater's and some others about the Barbican, were observed to bear such quantities of fruits as they never produced the like either before or since. . . . This is that pernicious smoake which sullies all the city's glory, superinducing a sooty crust of furr upon all that it lights on, spoiling the moveables, tarnishing the plate, gildings and furniture, corroding the very iron bars and hardest stones . . . insinuating itself into our most precious repositories. . . ."

The use of the Newcastle coal was no less destructive to the human frame, in Evelyn's opinion, than to inanimate things, and he did not hesitate to say so, although in doing so he considered that he was exposing himself to the hostility of the Faculty of Medicine. The College of Physicians, it seems, was disposed to esteem the smoke of London rather as a preservative against infection than as an agent of disease. Evelyn will not allow it this advantage, averring that there was more infectious disease than in Paris, the places being then reckoned the same size, although the air of Paris was remarkable for its purity. He attributes half the mortality of London to "phthisical and pulmonic distempers," directly due to the polluted atmosphere; "and where under Heaven is there such coughing and snuffing to be heard as in the London churches?"

He admits that "a tabid body might possibly trail out a miserable life of seven or eight years by a sea-coale fire as 'tis reported the wife of a certain famous physician did by the prescription of her husband." But against this we must set the case of a merchant who "though he had frequent business in the City, was yet constrained to make his dwelling some miles without it, and when he came to the Exchange, within an hour or two grew so extremely indisposed that he was forced to take horse (which us'd therefore constantly to attend him at the entrance) and ride for his life until he came into the fields."

Evelyn was too practical a man to waste time in lamenting an evil for which there was no remedy. He proceeds to offer a twofold plan for "meliorating and refining the aer of London." To talk of serving London with wood for fuel, as Paris is served, was absurd; the supply was quite inadequate. He proposed instead, firstly, the removal of "such trades as are manifest nuisances to the City, such as brewers, dyers, sope, and salt boilers, and lime-burners, to further distances; enjoining by Act of Parliament that all such works be removed five or six miles down the river." By this means work would be found for thousands of watermen and the spaces left clear would serve as sites "for tenements and noble houses for use or pleasure." His second suggestion was characteristic of the author of "The Discourse on Forest Trees." He proposed that all low ground circumjacent to the city, especially east and south-west, should be divided into square plots of from twenty to forty acres separated from each other by plantations of fragrant shrubs, such as Sweetbriar, Jessamine, Syringa, Roses, and above all Rosemary, "the flowers of which are credibly reported to give

their scent above thirty leagues off at sea upon the coasts of Spain."

The space between these delicious hedgerows was to be filled with Pinks, Gillyflowers, Cowslips, Lilies, Musk, Thyme, and Marjoram, and all those blossoms "which upon the least cutting and pressure breathe out and betray their ravishing odours." By this means "the aer perpetually fanned from so many encompassing hedges of fragrant shrubs . . . the whole City would be sensible of the sweet varieties of the perfumes as well as of the most delightful and pleasant places of recreation for the inhabitants. A diversion might thus be yielded inferior to none that can be imagined for health, profit, and beauty," and those "that walk and converse in London" instead of being "pursued and haunted by that infernal smook," might dream themselves transferred "as if by a certain charm or innocent Magick" to that part of Arabia which "is therefore styled the Happy because it is among the gums and precious spices."

In reading history one never knows whether the changes that have taken place, or the changes that have not taken place, are the most remarkable. The London Evelyn wrote of is not the London we know. My Lord Bridgewater's fruit no longer ripens in the Barbican, and we are no longer tempted to walk in Spring Gardens by "the solemnness of the grove and the warbling of the birds." But the city which already in Evelyn's day "commanded the proud ocean to the Indies," still "wraps her stately head in clouds of smook and sulphur, sullyng the glory of this imperiall seat."—H. C. M. (in "St. James' Gazette").

South Africa.

Farms in South Africa.

Schemes are now afloat to attract settlers into the Cape Colony. Mr. C. Forrest Rigg sends us a pamphlet entitled "New South Africa," which gives interesting details on all conceivable points of an irrigation farm in a fertile district of the Colony, situated 162 miles by rail from Cape Town and 53 miles from Worcester. It is in touch with various markets. The prospects are enticing, and as the prospectus is free we would advise any who are interested in the matter of South African colonisation to write and obtain a copy from Mr. C. Forrest Rigg, at his address, Box 255, Cape Town; or Burmester's Buildings, 78, Adderley Street, Cape Town.

Agricultural Schemes in the Transvaal Colony.

Already the Government have established farms in the Transvaal. They have cultivated 2,000 acres near Pretoria, and from this piece of ground they are able to supply the local troops with magnificent Cabbage, Peas, Beans, Turnips, and other vegetables, and have a good surplus over. Besides the vegetable farms, there are large areas under Barley and Oats, the Barley being cut green and sent daily to freshen up horses in the remount camps. Lucern as a crop also promises to do exceptionally well, and be of very great value in the country.

Fruit Growing in Cape Colony.

The Journal of the Board of Trade reproduces some remarks on fruit growing in the Cape Colony from the official organ of the Department of Agriculture of the Cape. Great progress has been made in fruit culture there during the last fifteen years as regards its economic importance, and it is evident that, in part at least, the foundation has been laid of an industry which, if carefully developed, may in time have a great and beneficial influence on the agricultural development of the country, especially of the western part of it. Though the agricultural resources of the colony have been the subject of attention for over two centuries, fruit growing was of no practical importance until recently. But of late years the railways now give ready transport; larger markets are open, and the vineyards have been attacked by phylloxera, so that fruit culture got a good start. About ten years ago general interest began to be taken in the industry, which was regarded as capable of replacing Vine cultivation. Vineyards were uprooted to make room for fruit trees, and the existing large orchards were planted, mainly in the Stellenbosch, Paarl, and Worcester districts. In 1898 the number of fruit trees in the colony was about 3½ millions, of which 1½ million were Peach, over ¼ million Fig, 356,000 Apple, 326,000 Pear, and the remainder mostly Apricot, Orange, and Plum trees. Last year the value of the fruit exported was about £5,000. It has now been found by experience, besides the difficulty of yielding quick returns, that the fruit crop is liable, even in the western districts, to periodical failure, and that the cultivation of large orchards is more expensive than that of large vineyards, while the handling of large quantities of fruit, even close to the railway, is surrounded by difficulties. Hence a very rapid growth of the cultivation is not to be anticipated.



Autumn and Winter Crocuses.

How seldom one finds these charming flowers (especially *Colchicums*) in private gardens. Why this should be so is difficult to understand. It cannot be because they are difficult to manage; they are amongst the simplest of plants in this respect. There is, however, one important point about the time they should be lifted. I am often asked this question: "Should autumn Crocuses and *Colchicums* be lifted after they cease to flower in the autumn?" The reply is, "Certainly not." The proper time to lift is after they have completed their growth, which will be, in the case of the *Colchicums*, the end of July. These flower from August till the end of October, and in some cases, according to the rains, far into the winter, and do not commence leaf-growth until spring. Therefore they are in the worst possible condition for removal from the soil just after flowering, as they are in an exhausted condition. The best time to lift and ripen the bulbs is when the foliage begins to turn yellow. No time should be lost, as they soon begin to form new roots.

I do not think it is good practice to be constantly lifting these bulbs or corms. I think every three years is often enough, by which time they form good masses, and they certainly never look so well as in this way. With regard to the *Crocus*, these will require somewhat different treatment, because they produce flowers and foliage simultaneously, and therefore should be lifted in spring, or when the leaves show signs of decay. Some of the varieties of *Crocus*, as well as the *Colchicums*, do well planted in the grass, viz., *zonatus* and *longifolius*. Both are fine for this purpose. The first-named was, until lately, in flower in the grass here, and closely succeeded *Colchicum pulcherrimum*, a charming variety. Of course the ordinary *Colchicum autumnalis* was the first to flower. This was quickly followed by *speciosum*, and the best of them all—*persicum*. These will be succeeded by the following species and varieties: *Crocus Fleischeri*, *C. Korolkowri*, *C. chrysanthus*, *C. Olivieri*, *C. Susianus*, *C. Weldenii*, *C. versicolor*, and *C. Etruscus*.

Then come the Dutch sorts to carry us along to May. Another point in favour of these winter flowering *Crocus* is their extreme hardiness. Coming, as many of them do, from the northern parts of the world, they smile at our frost. After the 16deg frost experienced here on the 17th, the flowers of *zonatus* and *longifolius* were unhurt, and perfectly fresh, and have continued to push up fresh flowers every day since.—T. ARNOLD, Cirencester.

[Our correspondent kindly sent a sketch of two varieties of *Colchicum*—*C. speciosum* and *C. zonatus*, but these we must omit, with our thanks all the same.]

A New Race of Irises.

I enclose you a circular (writes our correspondent) from my friend Mr. Caparne, who has for many years, but only recently in Guernsey, been engaged in raising a new race of Irises. He will shortly have some blooms of the new hybrids ready, and has promised to let me have some to send you for inspection by the Royal Horticultural Society's Floral Committee. I wish you could see his collection of these all faithfully portrayed by his own hand in water colours. I spent one day last week, a most delightful hour in looking over them. I take it that when these flowers get fairly into commerce they will be found very useful, many of them blooming at a time when flowers are scarce.—W. HOLMES.

We consider the matter printed in Mr. W. J. Caparne's (Rohais, Guernsey) circular, of sufficient value to print it in the *Journal*, and the full text is given accordingly as follows:—

"The first step towards the production of this new race of Iris, which I have called 'Early Alpine Hybrid,' was the collection of every known or obtainable species of early flowering Bearded Iris, which were then crossed with a view to improvement in colour, habit, size of bloom, earliness, or increase in number of flowers upon one stem. The results of which being obtained after from five to eight years, proved but a partial success, the tendency to reversion being always very strong. These first hybrids were then crossed both with original plants and each other. The results brought many greatly improved flowers, several of which exhibited new tendencies, such as lying flat open, &c., instead of the simple upright standards and pendent falls; but it is from the third generation that the finest and best flowers are presented. These (the best named varieties in my list) are still appearing, many more coming up from the seed pans each year, for the seed is frequently from three to four years in germinating, and each season shows an addition to new varieties.

"The early attempts were very much hindered by spring frosts, which, in some seasons, did a year's damage in one night, but

this has been overcome by bringing the plants over to Guernsey, where such is their hardihood that flowers are to be picked from them during October, November, December, January, February, and March, out-of-doors without protection or shelter of any kind. Thus, after twenty years of effort, was inaugurated this new race of Iris, which should be a good substantial addition to our early spring flowers. They will bloom in England with slight forcing in January and February, in a cold house in February and March, and out-of-doors in March, April, May. For market purposes they travel perfectly if cut in bud and tightly packed, are very sure to fully expand in water to the last bud, and after opening can be worn or used without water for any kind of decorations. Their flowers last each from three to six days in perfection; if opened in heat they should be afterwards kept in a cool place, as is the case with all other flowers. They are fragrant, even the rhizomes of many have a delicious scent of Violets.—W. J. C.

Outdoor Chrysanthemums.

Thanks to "W. M. J." for his timely reminder on page 492. The Watsonian stand of these early bloomers was certainly one of the redeeming features of the late show in Dublin; a "powerfully weak" show so far as "Mums" were concerned. Somehow, the small and early varieties of the incomparable autumn flower never appealed to me as a grower. "Prejudice," will be said. Exactly so; for 'tis rare to find, that rich rare diamond, an unbiassed mind," especially amongst gardeners. However, this particular season, and at this particular show, which took place between the penning and printing of the paper eliciting your correspondent's refresher, the small and early ones spoke better for themselves than anything which could be said by—K., Dublin.

Mutual Improvement Societies.

The recent able articles by "H. K." and "E." on the subject of "Gardeners' Mutual Improvement Associations" are, I think, singularly well-timed, and calculated to draw attention to the importance of these organisations. May I venture to add just a word or two on some phases of the same question? First, I do not think that employers have yet fully realised the advantage (I had almost said necessity) of the work done by these societies, and, to give quite a low level reason, how much employes have to gain by the carrying on of this work. If the periodical meetings for discussion of matters connected with the "science of horticulture" are a success at all, it must mean that the members are better equipped for the great calling in which they are engaged, and if this is so, surely it is obvious that they must be more valuable servants. Consequently, if the primary advantage is to the man, the secondary must be to the master.

What I want to suggest is the importance of securing all the possible help from the gentry who are at once lovers of horticulture and employers of labour, both for their own and the societies' sakes. Some societies are well favoured in this respect, but I know that the matter is often altogether overlooked by those who, after all, reap in the end much of the benefit. I admit that here, as in other directions, the "evil is wrought from want of thought as well as want of heart." Perhaps your widely read journal will remind some of those we ought to reach of their privilege in the direction I have indicated. The other matter is the importance of each society securing, if possible, the valuable addition of a small library. By common consent the incomes of even our head gardeners are not often large enough to allow them to devote much to the buying of books. Here, surely, there is a field for well directed efforts on the part of those who care for the educational side of the craft. I do not suggest the establishment of libraries of purely technical works, though sometimes that may be helpful, but what I would rather see is the putting within the reach of young gardeners, more especially some of the comprehensive, yet readable, works which are so plentiful to-day. I will not try to draw invidious comparisons, but personally I would rather have twenty manuals than one bulky treatise, and the choice is so unlimited, and the range so wide, that there should be no difficulty in making this one of the most valuable adjuncts to the societies.

However original we may try to be in the preparation of our essays, some reading is necessary, and I sometimes fear that we know not what we lose, because the young gardener of to-day is not more taught the importance of reading, and not more easily helped to the accomplishment by having readable matter easily accessible to him. And if the young men in our establishments do not at first catch the spirit of our endeavours, surely it is worth while making a big effort on their behalf. Their life is not all honey, wages generally pretty low, knowing, for some years at least, little of the beauty of home life, the bothy often as comfortless as the parish workhouse; these seem to me to call for all the sympathy and the brotherliness that can be given, and if by the societies, which we are glad to know are multiplying, something of this is accomplished, they will have to the very highest extent fulfilled the purpose for which it seems to me they are eminently fitted.—W. ELLIS GROVES, Bristol.



Chrysanthemum Groups.

Chrysanthemum groups, as a rule, are not what one pauses to admire for very long. There is generally a deadly sameness about them—they all follow the orthodox conical build, and are piled-up, as evenly as the exhibitor's eyes allow him to be judge, in this direction. We require a "break away," and a greater mixture of large Japanese flowers or flowering plants, with the purely decorative singles, spidery varieties, pompons, and other forms. All who saw Messrs. Wells' group at the Royal Horticultural Society's Drill Hall meeting, on October 29, will be able to picture the style of Chrysanthemum group that we allude to. Here the flowers and plants were good, to start with (as they are also in the accompanying illustration), but, having more space to work out their idea, and having varieties of all sections of the flower. Messrs. Wells contrived to furnish such a group as kept the visitors in a state of the highest delight with the effort.

Then there are the fountain groups, known to all frequenters of the National Chrysanthemum Society's exhibitions in the Royal Aquarium at Westminster; and yet these are not always what they ought to be—that is, fine, graceful, bright, varied, and unmistakably beautiful. Mr. H. J. Jones and others labour skill and patience on their Chrysanthemum groups, and the result is—what? They produce a blending of forms and colours that cannot fail to charm all who have the good fortune to see such groups. The committees who draw up the regulations and arrange the classes ought, so far as is practicable with the space they may have at disposal, to allow a much larger amount of space than they usually do for groups. Rather do away with other classes, but let us have beautiful shows.

The photograph of the group on page 511 was sent by Mr. Robert Craigie, The Gardens, Weston Hall, Otley, Yorkshire, who also sends the following letter:—"Having seen some comments on stiffness in Chrysanthemum groups in a recent number of the Journal, I forward a photograph of the group I had at Otley Chrysanthemum Show on the 13th of November. The group was arranged in a semi-circle of 50 square feet, including a margin of foliage plants, and was 11ft high at the back. The plants were chiefly grown in 6in and 7in pots, and had fresh and fully developed flowers quite fit for a show board. The groups are judged by points, and the judges awarded me the maximum for quality of bloom, and one point short of the maximum for freedom and diversity of arrangement.—P.S. Perhaps you will excuse me for adding that the notes on timing by 'E. D. S.' in the Journal, practically agree with my experience here, and his advice on feeding is sound, for more Chrysanthemums are ruined by over-feeding than from all other causes put together.—ROBERT CRAIGIE."

Blooms Arranged with Foliage and Plants.

Chrysanthemum blooms of various sizes, types, and colours lend themselves readily to various schemes of decoration, especially when they can be associated with tasteful sprays of foliage and fronds of Ferns. The chief point in their arrangement is to use them more or less sparingly, and not set them up stiffly. For this reason the larger blooms are not nearly so useful as those of smaller and medium size, which have a far more graceful appearance in any floral conception. The single and pompon varieties are, perhaps, the best of all. They lack the heavy character of the big blooms, and when they can be employed in a fresh, bright condition cannot be surpassed.

The effect of an arrangement of cut blooms and foliage may be considerably enhanced if a good base of moss is used, and a few graceful Palms in pots or other suitable foliage plants are interspersed among. A good deal may be done with a base of moss, fresh, green, and damp sphagnum being the best. For an arrangement on a large tray, 3ft or 4ft square, the centre might be occupied by a good Palm. Cocos Weddelliana is one of the best for this purpose, but a little variety should be encouraged. The Cocos being one of the handsomest Palms when growing in small pots, this variety should be utilised for positions at the corners or sides of the arrangement, employing for the centre either a larger plant of this variety, or another Palm, such as a Kentia.

Small Crotons and Dracenas are also permissible in the arrangement. Small pots of Pteris serrulata and Adiantum cuneatum may be placed on the sphagnum. The Chrysanthemums, tastefully arranged in vases which will not hold too

many blooms, completes the arrangement. The blooms look all the better when they can stand clear of each other. To ensure this, place the stems through an arrangement of wire netting placed convex form on the mouth of the vase. The ends should touch water to keep the blooms fresh as long as possible. The border of the tray may be treated with long sprays of Smilax and Asparagus Sprengeri.

As a variation from the foregoing, have a central vase of Chrysanthemums, with a Palm in centre of vase, the blooms of Chrysanthemums, which may be large, being arranged thinly, and interspersed with the foliage of Crotons, Pteris, Eulalia, Adiantum, and Asparagus. Plants of the latter in small pots, with Palms, Dracenas, and Caladium Argyrites occupying the remaining space, introducing a few blooms of small crimson Chrysanthemums.

White and yellow Chrysanthemums mixed with Honesty pods, Eulalia, and Asparagus might form the contents of a central vase, smaller glasses of Chrysanthemums, each mixed with light foliage, completing the remainder, the whole having a mossy base, edged with trailing stems of Smilax.

Moss also serves as a good base for laying upon it small blooms of Chrysanthemums having bright colour. A central vase might contain single and thread-petalled varieties, intermixed with Ferns, Eulalia, Adiantum, and smaller glasses of mixed Chrysanthemums, Ferns, and foliage. With a deft hand, a tasteful eye, and suitable material, much originality in designing combinations is possible. Coloured berries and leaves are of great assistance, and Grasses always produce good effects, and should be largely employed in decorative arrangements of cut blooms.

—D. E.

Colour in the Garden.

To appreciate colour effect, and to distinguish between what is good and what is otherwise, does not yet appear to belong to the majority of the gardening fraternity. If it did we should see more discernment in colour choice, and florists would not continue to send out so many ugly coloured new varieties as they do annually. We have too many washy tints, too many suffused flowers, too many spotted, striped, and indescribable colours. The colours that please and impress are pure, rich, brilliant, or soft. Two analogous tints in one flower are, to my judgment and taste, neither pleasing nor delightful, just as two primary colours of the same tone together, are more or less objectionable. "This wretched copying," is a remark uttered by a baronet to his gardener a short time ago, and how true it is we may see in gardens in any particular district. The same plants, the same style of arrangement, meets one's view. I have been wondering why, and I have not yet hit upon any solution. Why do we continue to edge beds and borders with continuous single rows of dwarf edging plants, and sometimes, as with blue Lobelia, which is a violent contrast to the green turf?

The blending of harmonious colour is most difficult to carry out in its proper gradation in the flower garden; but we can avoid violent contrasts by having beds of one variety of plant. Quite recently I saw a dozen varieties of herbaceous Phloxes sent away by a nurseryman as sample varieties to choose from, not one of which were other than objectionable dull reds, washed-out mauves, and magentas. And what is finer in effect than the pure white Phloxes in bold masses, as I saw it this summer in the public gardens of a moderate-sized north country town? A large bed of it interspersed with clumps of Spirea Aruncus, flowering in June, was splendid. Then in August and September, along with Galtonia candicans, and Gladiolus Gandavensis, were dotted here and there amongst Phloxes. What is better? The system, all too prevalent, of planting out single plants, instead of bold irregulars, clumps, and masses, is also contrary to Nature's plan. Amongst the Antirrhinums there are streaked, splashed, and mottled flowers. The pure whites and lemon "sells" are really effective in beds and borders, being also useful as cut flowers, for they last well. I have used them in wide-mouthed vases and bell-shaped glasses with capital effect.

Cactus Dahlias are gems for colour, but we invariably see them in straight lines instead of in groups. Amongst my favourites are the old Juarezi, Glare of the Garden, Kyrerith, Countess of Radnor, and Countess of Pembroke. Pentstemons sometimes require careful selecting. The small-flowered red variety, named Newbury Gem, may be brought under notice as being striking and distinct when in large round beds. Single-flowered, tuberous-rooted Begonias are idealistic in colour, and they stand so well, and are useful as cut flowers for the dinner table. Let us have beds of these in one colour, either crimson, yellow, orange, or white, and our flower gardens will have irresistible charms. The semperflorens varieties of fibrous-rooted Begonias I do not much care for. Zonal Pelargoniums cannot be dispensed with for brilliant colour effect, and annual Asters

(the Comet or Chrysanthemum flowered) in white or purple afford a lovely effect. The Quilled and Anemone flowered are anything but things of beauty. The Asters are also useful for cutting.

Hardy Fuchsias furnish bright plants. Old plants can be lifted and stored, or plants can be raised from cuttings taken from stock plants in early spring, and struck in warmth. The latter make nice dwarf plants which flower from August onwards. Serviceable varieties are Dunrobin Bedder, *macrostema longiflora*, *macrostema gracilis*, and *Riccartoni*.

Ivy-leaved Zonal Pelargoniums are charming bedding plants, though the only varieties used for bedding in the North are *Mme. Crousse* and *Souvenir de Charles Turner*; but I see no reason why such other varieties as *Jeanne d'Arc*, *Ryecroft Surprise*, and *Annie Pfitzer*, should not be successfully used. *Nemesia strumosa* is a pleasing half-hardy annual, and can be grown in large masses in front of herbaceous borders. The individual flowers are large, the variety called *Suttoni* being best known.

large enough, and grown cool until they can be bedded out, furnish plants for a fine display in the late summer months. At Brancepeth Castle, Durham, there are annually about 800 plants so grown, and are planted into the borders in the kitchen garden near a main walk, where they are always resplendent in the late summer.

Beds of *Violas* in self colours are always admired. *Saponaria calabrica*, when sown early in April, is charming for the front of borders, the small pink flowers being borne in great profusion. *Heliotropium*, more particularly the deep blue varieties, when given generous treatment are grand bedding plants. One may also mention herbaceous *Lobelias*, especially *L. cardinalis*, *L. fulgens* *Queen Victoria*, the most brilliant for bedding. *Humea elegans* is a graceful plant, which is bedded to the extent of 100 plants at Lowther Castle, Westmoreland. The seed is sown in a cold frame in June, and the plants grown cool all through. They are potted on as required until the bedding time, in the end of June. They must be most carefully watered,



A MODEL GROUP OF CHRYSANTHEMUMS.

Zinnias have done well during this hot, dry summer, but they do not please everybody, being rather formal in character. French and African Marigold in bold clumps are rich in colour. The dwarf French Marigold *Legion of Honour* has been most effective in large beds. *Tropæolums* (*Nasturtiums*) of the dwarf, Tom Thumb class, are wonderfully brilliant and free flowering when not planted in fresh manured soil, as they are liable to run too much to leafy growth.

Calceolaria amplexicaulis and *Salvia patens* look fine when planted in close proximity, the deep blue of the *Salvia*, and pale yellow of the *Calceolaria*, pleasingly contrast. *Coreopsis Drummondii* and *C. tinctoria* are also showy, as are the German *Scabious* when a good strain is procured, and I have always found them admired as cut flowers in rooms. The miniature annual *Sunflower*, from its free flowering and dwarf branching habit, is a most desirable bedding plant. *East Lothian Stocks* are not so largely nor so well grown as they should be. When sown in July and wintered in frames they are fit to be planted out early in May, and flower well throughout the summer; or, if sown the first week in February, and potted singly into 3½ in pots when

and never allowed to become pot-bound. Fumigating at regular intervals, to keep green fly at bay, is also practised.—F. STREET.

Preservation of Wild Flowers.

Perhaps it is as necessary here as in the United States to inaugurate a fund such as that contributed by the Misses Stokes to the New York Botanic Garden, for the furtherance of such measures and investigations as would aid in the preservation and protection of the plants of the native flora. The sum of 3,200 dollars has been given. The establishment of this fund will widen the usefulness of the garden in a very desirable direction, and its administration will doubtless accomplish much in the promotion of a healthy public sentiment in the matter. An active propaganda looking to the preservation of the native flowers is imperative in our own land, quite as much as in America. The ill-judged and misdirected energies of certain so-called nature-study movements are having a distressing effect in devastating the suburban districts of their natural beauties.

NOTES

NOTICES

Weather in London.

During the past week the weather has been on the whole mild. Dull days have been most in vogue, though both Saturday and Monday were highly delightful and bright. Wednesday was black.

Weather in the North.

On only two morning of the week ending the 3rd inst. was any frost experienced, on each about 5deg. The 28th ult. was an extremely fine day. Since then high westerly winds have prevailed, and some rain fell during the night between the 2nd and the 3rd.—B. D., S. Perthshire.

Brussels Botanic Garden.

It is announced that M. Crépin, the distinguished Director of the Brussels Botanic Gardens, has resigned his position owing to the state of his health. It is very probable that M. Crépin will be succeeded by M. Th. Durand, the active and able conservateur there.

The late Mr. Thomas Meehan.

Referring to the death of this noble man, the New York "Florists' Exchange" says:—"The passing away of Professor Thomas Meehan, of Germantown, Pa., on Tuesday, November 19, at the ripe age of seventy-five years, removes from the midst of us one of the brightest ornaments possessed by horticulture in modern times. Born the son of an English gardener, and with but the birthright that falls to the lot of the children of those engaged in that honourable calling, Mr. Meehan, by dint of push, energy, and painstaking hard work, raised himself to the proud position of being classed with the foremost scientific workers in his chosen field. Devoting his long and useful life to the study of Nature, and wresting from her her hidden secrets, these with commendable liberality he promulgated broadcast for the welfare and benefit of his fellow man. His record as a scientist and horticulturist, as a citizen working at all times for that which tended, through educational means, to the amelioration, advancement, and enjoyment of the public, is one with which but few men can be accredited. He leaves to his stricken family a priceless heritage—the story of a well-spent life; while his many deeds of heart and mind will stand forth as undying memorials of one who was the personification of the highest type of noble, unselfish, progressive manhood."

Scottish Notes.

The Peterhead Horticultural Society held its second Chrysanthemum Show last week, and proved highly successful. Dr. Stewart, well known in Peterhead, gave a discourse on the history of the flower. * * On November 29, in Grove Academy, Broughton Ferry, a lecture was given on "Woodland Studies as Depicted by the Camera." In the course of his interesting remarks, Mr. David Ireland hinted that municipalities might do more than has been done in the past in the way of providing summer and winter gardens in towns, so as to create and foster a love of the beautiful in Nature, and he pointed out that if a different course was not pursued this country would soon be depleted of the fine old trees so familiar to the landscape. A great variety of lantern views were shown pertaining to the subject, many of them being local. In endeavouring to improve the amenity of the town by the purchase of the Grassy Beach, a plebiscite was narrowly averted, indicating that strenuous opposition might be anticipated to any departure in the direction of providing public gardens. Even if they succeeded in inducing Dr. Carnegie to contribute, the community would still require to pay, as that gentleman only gave where communities helped themselves. * * Mr. J. D. Johnstone, Montrose, conducted the first of four lectures on fruit growing, in the Town Hall on November 29, under the auspices of the County Council. Mr. Johnstone placed great stress on the value of cold storage of fruits to keep the crop long enough to prevent glutting the market and taking panic prices. All fruit growing tends to over-production.

M. Max Leichtlin.

This well-known horticulturist of Baden-Baden has received from the Société d'Horticulture de Prusse, on the occasion of his seventieth birthday, a large silver-gilt medal in recognition of the services he has rendered to horticulture.

Death of Mr. J. H. Krelage.

We regret to hear that Mr. Jacob Heinrich Krelage, senior partner of the firm of E. H. Krelage and Son, and ex-president of the Bulb Cultural Society of Haarlem, and many other horticultural societies of Holland, calmly passed away on December 1 at the age of seventy-seven.

Appointments.

Mr. H. Ball, for the past four years foreman in the gardens of the Duke of Northumberland at Syon House under Mr. George Wythes, V.M.H., as head gardener to Robert Dannksey, Esq., Agecroft Hall, near Manchester. * * Mr. John Stringer, for ten years head gardener to Thomas Arnall, Esq., at Brookside, Headington, Oxford, has been appointed head gardener to Dr. Playfair, West Green Manor, Winchfield, Hants.

School Children and Bulb Culture.

In the "Dundee Advertiser" for Tuesday, November 26, details were given regarding the large number of bulbs purchased this season by the Dundee school children in connection with Mrs. Carlaw Martin's scheme of home flower-growing in that city. It is interesting to know that no less than 9 tons of suitable soil have been supplied to the little home gardeners under the arrangement whereby the Town Council is helping to further the good work. The soil, which was specially prepared by Mr. Carnochan, superintendent of parks and cemeteries, was carted to Dudthorpe Castle, in the Barrack Park, and there its distribution to the little folk was superintended by Mr. J. R. Montgomery, the caretaker. Day after day, after it had been announced that a supply was available, the children came in troop, and, having been marshalled in single file by Mr. Montgomery (who took a note of their names and addresses and the school they attended), they were quickly supplied, and marched away bearing their burdens in triumph. From all parts of the city they came, carrying all sorts of receptacles, which they filled as full as possible, with an air of utmost confidence that the soil contained all the peculiar virtues in which lies the secret of successful bulb culture. About 5000 boys and girls were supplied. Mr. Mathers, convener of the recreation committee of the Town Council, took an active interest in distributing the soil (or mould).

National Rose Society.

We beg to inform you that the twenty-fifth annual general meeting of the National Rose Society will take place at the rooms of the Horticultural Club, Hotel Windsor, Victoria Street, Westminster, on Thursday, December 12, at 3.30 p.m., to receive the report of the committee, to pass the accounts, to elect the committee and officers for the ensuing year, and for the transaction of other general business. The proposed alteration of bye-laws and regulations are:—Proposed that Bye-law 2 be altered to read as follows: "That this society consist of members paying annual subscriptions of either one guinea or half a guinea." Proposed addition to Regulation 2: "But where sufficient prominence is given in the schedule to classes for decorative and Tea Roses the committee may grant permission for a two days' show." Proposed that Regulation 15 be altered to read as follows: "Hybrid Teas are regarded as Hybrid Perpetuals in competition, unless specially excluded by the schedule, and may not be shown in the Tea and Noisette section." Proposed new Regulation: "All boxes must be on the stages where they are to be judged, and all the lids removed fifteen minutes before the time appointed for judging." Proposed that Regulation 18 be altered to read as follows: "All blooms exhibited (except where specially directed in the schedule to be shown in vases or other receptacles) must be staged in boxes of the regulation size—viz., 4in high in front and 18in wide, and of the following lengths (all outside measurements): For twenty-four blooms, 3ft 6in long; for eighteen blooms, 2ft 9in long; for twelve blooms, 2ft long; for nine blooms, 1ft 6in long; for six blooms, 1ft long; for eight trebles, 3ft 6in long; for six trebles, 2ft 9in long; for 4 trebles, 2ft long." A meeting of the committee will be held immediately after the annual general meeting to elect the general purpose committee for the ensuing year.

Trade Note.

In response to a very widely expressed wish, and to facilitate their trade in the Midlands and South of Ireland, Messrs. Alex. Dickson and Sons, Limited, announce that they are about to open a seed, bulb, nursery and florist establishment at 61, Dawson Street, Dublin.

Flowers Stop Traffic.

The Water Hyacinth has grown so freely in the Brisbane River that it has completely blocked navigation. A rise in the river, however, detached huge masses of the Hyacinth, which floated down to Brisbane. Great patches, beautifully green, with purple flowers, swept down the river, at times stretching from bank to bank.

Cassell's "Dictionary of Gardening."

The seventh part of this serial work has been published, price 7d. net. It runs from *Depressaria* (a genus of small moths) to *Eurycles*, thus nearly completing up to F. Besides the numerous half-tone illustrations, a coloured plate of *Cattleya Warscewiczii* is provided.

Railway Rates and Fruit Transit.

The members of the Birmingham Wholesale Fruit Merchants' Association dined together at the Great Western Hotel, on Thursday, November 28. The Lord Mayor was in the chair. In proposing the toast of "The Birmingham Wholesale Fruit and Potato Merchants' Association," he said he was interested in their attitude concerning railway rates. He was afraid that a good deal more might be done by the railway companies in that direction, and he wished they could impress on them more than they seemed able to do the need for carrying fruit and other articles long distances in this country at cheaper rates. He understood that the companies would bring Potatoes from Hamburg for 16s. 6d., whereas from Inverness the charge was 35s. Much nearer home there were difficulties in bringing parcels of fruit and vegetables successfully and cheaply from the Vale of Evesham, and it seemed hard that it should be so. We would draw attention to an article from the pen of "Merlin" that appeared in Sunday's "Referee," December 1.

Sussex Weather.

The total rainfall at Abbots Leigh, Hayward's Heath, for the past month was 0.71in, being 2.89in below the average. The heaviest fall was 0.22in on the 12th; rain fell on six days. This is the first November in twenty years when less than 1in has been recorded, 3.60in being the average. It is also the driest month of the year. With only a normal rainfall for December this will be the driest year of our twenty years' record in this district. The maximum temperature was 58deg on the 11th; the minimum, 19deg on the 17th; mean maximum, 46.27deg; mean minimum, 34.03deg; mean temperature, 40.15deg, which is 3deg below the average. We have experienced two unusual atmospheric conditions for November in mid-Sussex, viz., three days thick fog—5th, 6th, and 7th—and three night frosts—15th, 16th, and 17th—with a gale in between. The consequence is that outdoor Chrysanthemums, often seen on walls and the sunny sides of cottages to the end of the month, were destroyed when only at their best.—R. I.

German Potatoes for British Troops.

The annual general meeting of the Coleraine Farming Society was held in the Café Hall, Coleraine, Ireland, on Nov. 26, Colonel H. J. L. Bruce, J.P., Downhill, in the chair. Mr. S. S. Young proposed:—"1. That the Coleraine Farming Society, assembled at their annual meeting, respectfully beg to enter their protest at the recent purchase of 1,250 tons of German Potatoes for the use of our troops in South Africa while the crop in Great Britain and Ireland this year is a superabundant one of the finest quality, and it is selling at prices quite unremunerative to the growers. German Potatoes are admittedly of inferior quality. This society think that the conduct of the purchasing department of His Majesty's forces in this matter requires investigation, and they trust that precautions will be taken to prevent further purchases of foreign Potatoes so long as home supplies can be secured at moderate prices. 2. The Potato crop being seriously short in America this year, they would further ask that representations be respectfully made to the American Government, asking that the present unreasonable and prohibitive import duty of 39s. 2d. per ton be suspended for the season, or, failing this, that it be substantially reduced."

The Dublin Field Club.

At a recent meeting of the above Professor Johnson, D.S.C., showed that the Potato fungus (*Peronospora infestans*) had produced its mycelium on the Tomato, suggesting that fungi prominent on one type may adapt itself to the varied members of the same natural order.

November Weather at Belvoir Castle, 1901.

The wind was in a westerly direction nineteen days. The total rainfall was 1.53in, this fell on thirteen days, and is 0.87in below the average for the month; the greatest daily fall was 0.58in on the 11th. Barometer (corrected and reduced): Highest reading, 30.666in on the 24th, at 9 p.m.; lowest, 28.951in on the 12th, at 9 p.m. Thermometers: Highest in the shade, 61deg on the 19th; lowest, 18deg on the 17th and 25th; mean of daily maxima, 46.50deg; mean of daily minima, 33.70deg; mean temperature of the month, 40.10deg; lowest on the grass, 16deg on the 17th and 25th; highest in the sun, 95deg on the 1st; mean temperature of the earth at 3ft, 46.06deg. Total sunshine, 73 hours 50 minutes, which is 11 hours 58 minutes above the average for the month; there were fourteen sunless days. The frost has not been so severe here in November since 1879; the following December and January were unusually severe in that season.—W. H. DIVERS.

More About Japanese Dwarf Trees.

At a recent meeting of the Japan Society, held at No. 20, Hanover Square, London, a paper was read by Mr. Toichi Tsumura on the Dwarf Trees of Japan. The paper was illustrated by a number of growing specimens and by lantern slides, exemplifying the different forms of training adopted for Maple, Pine, and other Conifers, and Bamboo; a fine *Araucaria*, only 30in high with its pot, and the Japanese garden at the Glasgow Exhibition. The method was then explained of forming upright trunks by cutting them at the height required and grafting younger trees thereon to develop foliage, the roots being sawn away when the operation is completed. Pictures representing Pines and Cedars, with branches bent in a series of angles, were then shown, followed by examples with part of the roof high above the ground. The author then passed to the consideration of the care of these miniature trees. The pots for Conifers should be small, the mould laid on a basis of gravel, and not too tightly packed. Water should be given sparingly, and when it becomes necessary to change the mould the fibrous roots must be cut to prevent the trees growing out of shape owing to the impetus due to increased nutriment from the soil. Evergreens should have fresh mould once in three years, and deciduous plants once every year. The practice of dwarfing trees was ancient, and probably introduced into Japan from China, though the methods of cultivation had been somewhat changed. The author then drew attention to a fine specimen of the Bonkei, or miniature landscape gardening, the highest development of the cultivation of dwarf trees. The hall was crowded in every part, and a unanimous vote of thanks was accorded to Mr. Tsumura for his paper.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. November.										
Sunday ...24	S.E.	deg. 25.5	deg. 24.8	deg. 34.5	deg. 22.8	Ins. —	deg. 39.4	deg. 45.5	deg. 48.8	deg. 18.7
Monday ...25	N.E.	28.3	27.5	42.3	25.1	—	37.7	44.3	48.7	19.0
Tuesday ...26	N.W.	41.4	38.6	44.3	28.0	—	37.2	44.3	48.5	21.1
Wednesday 27	N.E.	40.5	39.9	46.1	39.0	—	37.4	42.9	48.1	29.7
Thursday 28	N.W.	43.5	41.4	46.5	40.0	—	39.5	43.0	47.8	28.9
Friday ...29	N.W.	32.0	30.1	43.0	31.2	—	38.9	43.2	47.5	23.1
Saturday 30	W.	42.6	40.4	47.5	31.3	—	38.9	43.0	47.3	24.8
MEANS ...		36.3	4.7	43.5	31.1	Total. —	38.4	43.7	48.1	23.6

Dull, cold, dry weather has prevailed during the past week.



Trees for the Clydeside.

We believe a scheme is being undertaken by a Mr. A. Cameron Corbett, of Thornliebank House, Glasgow, to plant trees upon strips of land on the south side of the Clyde, running east from the Suspension Bridge, and also upon the strip of land between Jamaica Bridge and the Suspension Bridge.

Fruit Models.

With the large number of fruits named and scattered over the country, it is almost impossible for anyone to keep in memory the characteristics of each one, and yet nurserymen everywhere continually have fruits sent them for name. A correspondent to "Meehans' Monthly" makes the good suggestion that if someone would take in hand the making of plaster casts, properly coloured, of all the leading varieties of fruit, there would be sufficient demand for them to make the preparations profitable. There are few nurserymen, he believes, but would be glad to have on hand a dozen or so of the leading varieties of Apples and Pears, at least. He observes, further, that there is as just as much need of these models of fruit as there is of a herbarium to a botanist.

Home-grown Pine-apples.

May and June is a very important time to have Pine-apples ripe, as fresh fruit is not over-plentiful, and they are a great ornament at dessert, far transcending imported fruit in appearance, and are juicier and more briskly flavoured, besides having a much more pleasant aroma. Where a supply is required at the time named, and plants are not now showing fruit, it will be advisable to select from those started in March last which have completed a growth, and are now in a state of rest, such as show a stout base, the best indication of starting into fruit when subjected to a higher temperature, both at the roots and in the atmosphere. The plants are best placed in a structure to themselves. Where this cannot be afforded, they must have a light position in the house where the fruiterers are swelling. Maintain a night temperature of 65deg in the fruiting department, 5deg less in the morning of cold nights, and 70deg to 75deg by day; but in severe weather a few degrees lower is preferable to extra sharp firing.—PRACTICE.

Strawberries in Pots.

When the plants that were started early in December commence swelling the crowns and the trusses appear, the temperature may be advanced a few degrees by day, but 50deg to 55deg is sufficiently high at night. Syringe the plants lightly in the early part of fine afternoons. Examine them daily, and supply water to all that require it. Keep a sharp look-out for aphides. They cluster on the swelling crowns, and if any appear vaporise with nicotine compound, or fumigate with tobacco paper on two or three consecutive evenings. It is very important that the plants be perfectly clean, and fumigation must not be practised when they are in flower. Another batch of plants should be placed in a house from which frost is excluded, removing the decayed leaves, loosening the surface soil, supplying a top-dressing of rich material with a little steamed bonemeal added to it. Attend to the drainage; if defective, rectify it, and wash the pots. The plants may be introduced during the next three weeks to shelves in a Peach house started at the new year, or into a Strawberry house. La Grosse Sucrée, Vicomtesse Hericart de Thury, and Royal Sovereign are suitable varieties; also Keen's Seedling and Sir Harry, when true. Plants for starting later will be quite safe in their quarters outdoors plunged in ashes to the rims of the pots, and a light covering of dry fern or litter may be given in severe weather, allowing to remain until the plants are thawed after being hard frozen, otherwise remove in mild weather. If the plants are placed in frames, the lights should be drawn off in mild weather, but in this and wet tilt the lights at the back of the frames, so as to throw off the rains, yet let the plants have plenty of air. They cannot be kept too cool, and none should be allowed to suffer through want of water.—G.

The First Snowdrops.

Miss Constance Belliss, writing from Compton Hall, near Wolverhampton, says: "The first Snowdrops are just peeping through the ground; that is always a cheerful thing at this time of year."

Jottings on Pines.

Young growing plants are liable to become drawn and weakly at this time of year by keeping them too close, moist, and warm, the damage often being irreparable, and not infrequently arises from improper structures being employed. Well ventilated pits or small houses properly heated are most suitable for young Pine plants, as they can be kept near the glass, and should be given plenty of room. Maintain a night temperature of 55deg to 60deg, which, with 65deg in the daytime, will keep all young stock gently growing, admitting a little air at the top of the house at 65deg, leaving it on all day; but do not let the temperature fall below that point, and when the temperature advances to 75deg, a free ventilation must be allowed. The bottom heat should be kept steady at 80deg. Avoid a damp atmosphere; an occasional damping of the paths will suffice. Water only when necessary, but when the plants become dry then afford a thorough supply of weak liquid manure.—A.

Daphne Cneorum.

Considering the classical associations gathered around Daphne—who was one of the virgins of Diana, and was reported by Ovid to have been turned into some beautiful flowering bush now bearing the name—it is strange that those who are continually looking for English names referring to the ancient story have not dug up something that might be appropriate to our plant. But it continues everywhere as Daphne Cneorum, with no one objecting that it is a hard name. The bright, rosy-pink heads of sweet flowers, on its about 6in of height, are so unique in appearance as always to attract attention. It grows naturally in rocky or stony places along the shores of the Mediterranean Sea, and must present, as a wild flower, a very unique appearance. In our flower gardens it thrives best in soil that is rather open—one might say one that is the opposite of heavy clay. Though regarded as a spring-blooming plant, it has a fashion of flowering at different times during the whole season, till the full autumn period has arrived. Though perfectly hardy, it does not like the full blaze of the winter sun, and thus does better when planted in partial shade, provided the ground is not dried out by the roots of large trees.

Cereus nycticalus.

In earlier days of English gardening, the introduction of night-flowering Cactuses created a very vivid ripple amongst the votaries of it throughout the land. It was a great event when the first plant flowered, and the curious facts of the ephemeral glory of the beautiful flowers became known. No doubt the rumours descriptive of the wonderful plants were largely the incentive to the mania that arose during the middle of the Nineteenth Century for Cactuses. It was common for owners of a night-flowering Cactus to invite a party of friends to come and enjoy the rare sight when their plants developed blooms. However, the enthusiasm once again burned itself out, yet these later days have brought distinctively to notice the fact that Cactus culture is by no means obsolete, though the army of cultivators is, so far, still diminutive and disunited. We figure, on page 515, a huge flower of what is most commonly termed the night-flowering Cactus, *Cereus nycticalus*, and the close resemblance to the flowers of some of those charming new Water Lilies we have all heard so much of, and especially to the Queen of Water Lilies, the *Victoria regia*, is immediately apparent. Unfortunately, this most beautiful flower is scentless, and besides flowering at night, it is fragile and fleeting. The plants bloom at various times during autumn and early winter, beginning to open their flowers about seven o'clock in the evening. *C. nycticalus* and *C. grandiflorus* are both large-flowered species, but the former is the more æsthetic of the two. It is a native of the arid plains of Mexico, the home of so many other species, and most notably the Giant Cactus, *Cereus giganteus*. This genus affords some of the most wonderful examples of Cactus growth it is possible to refer to, and though slow to gain in stature or dimensions, the patient cultivator can always discover in their quaint and generally exact proportions a study of the highest interest and a continual source of wonder.



CEREUS NYCTICALUS, A WHITE NIGHT-FLOWERING CACTUS.



Roses in Winter.

There was a time when this was a more anxious subject than it is at present, it was the time when standards formed the great bulk of Roses grown in amateurs' gardens, and we can all remember how difficult it was to protect them. The place where the bud was inserted was from 3ft to 4ft above the surface of the ground, and consequently much exposed to the action of frost. Protection was afforded by fronds of Bracken, or Spruce Fir, or something of that kind being tied round where the young shoot was beginning to grow. This protection was liable to be blown about, and I have known many instances where it carried the young shoot with it. Of course, when this was the case the plant was useless, and many a groan and sigh was elicited by the grower after severe frost when he beheld the miserable condition of his plants.

I remember seeing, for instance, in the garden of Mons. Margottin, of Bourg-la-Reine, near Paris, a most beautiful even quarter of 30,000 plants about 3ft high, and as even as if they had been cast in a mould. I congratulated him on their appearance, but I had a most pathetic letter from him the following spring, saying that the winter had been a most severe one, and that he had lost every plant. Such experiences as these, and the introduction of the Manetti as a stock, led growers to consider whether

Dwarf Roses

were not to be the rule for the future. Following on this, the introduction of the seedling Briar by Mr. George Prince of Oxford, and the Briar cutting of Messrs. B. R. Cant and Sons, Colchester, a revolution was completely made, and all over the country quantities of dwarf Roses were cultivated. In the directions given for budding these, it was always insisted that they should be budded as low as possible; in fact, it was considered better to clear away a little of the soil before budding, and afterwards to replace it when the bud began to grow. There was one disadvantage in this, it was rather trying to those whose increasing years made the necessary kneeling position very trying to them; but I recall to mind one very enthusiastic rosarian who had passed his fourscore years telling me with great glee that he had just finished budding 400 plants. It therefore became much more easy to protect these dwarf bushes, especially when it is recollected that the grower is perfectly indifferent as to what becomes of the upper growth, which will nearly all come away at pruning time, and his only care is to protect the lower part of the stems, where the budding has taken place.

Protection.

I think it is a very good plan at this time of the year (as Mr. R. E. West has pointed out) to prune out the weak and useless shoots, as it is much easier to get at the plants when this has been done. This being done, the question comes, What is the best material for protecting? I do not think that manure is the best, as it is so wet it is apt to retain a good deal of frost. First, then, let the soil for the surface of the bed be drawn up round the base of the shoot, so as to cover them to the depth of 3in or 4in; over this may be placed the mulching that most Rose growers think it necessary to apply at this season of the year. This may be put on to the depth of 5in or 6in, or even more, and the fertilising salts which it contains will be washed down to the roots, that are continually active during the winter, and therefore after even a very severe winter, most of the plants will come out without their roots being injured.

These observations refer to the dwarf Roses in beds, but there are other Roses which have also to be considered. The Penzance Briars and single Roses generally do not suffer in severe winters; but there are some Tea-scented Roses and others which occupy favourable positions on walls which will have to be looked to. Frigi domo, bass mats, or any other suitable material may be used for covering these, but it should be done carefully, so that the covering may be easily removed when the weather is milder. In the more northerly parts of the kingdom growers will not attempt to grow Tea Roses out of doors, even on walls. [Thousands of Teas and Noisettes are grown out of doors in Scotland.—ED.] But here in the south the case is different. For instance, on a wall of my house I have, among other plants, one of Rêve d'Or, which covers a large portion of the east face of the house, and some years ago it was a perfect sight with 3,000 expanded blooms. I did not protect it, as it had suffered a good many years, but one very hard winter in the seventies I thought it was completely killed, and was pre-

paring to take it away when I saw some signs of life, so left it, and now it occupies a good portion of its former position.

Those of the Dijon race, such as the old Gloire de Dijon, Madame Berard, and Madame Trifle, seem to be tolerably hardy, and do well without any protection. The same may be said of the Hybrid Tea Longworth Rambler, which I have had for many years, and which does not seem to suffer in the least degree from frost, and gives me a quantity of bright red flowers. I should be very glad if I could get Cloth of Gold to succeed with me, but although I saw a splendid tree of it many years ago in my parish, it did not succeed with myself. I have said nothing about Maréchal Niel; no, but not on account of its tenderness, rather because its flowers hang so much that nothing is seen of it on the tree but the outside discoloured petals. It is an indoor Rose, and its proper place is the top of a greenhouse, from whence it can hang its golden goblets. People who write about the weather seem to predict a severe winter for us, but as yet we have, in the beginning of December, had none of it.—D., Deal.

Literature.

Formal Gardens in England and Scotland.*

This is a work of which the prospectus and specimen plates of Part I. have been sent to us by the publisher, Mr. B. T. Batsford, 94, High Holborn, W.C. The author of the work, now in course of being published, is Mr. H. Inigo Triggs, A.R.I.B.A., joint author of "Some Architectural Works of Inigo Jones." We know that the greatest care has been expended by the author and his assistants in securing correct and useful plans of various famous gardens, such as those of Longford Castle, Penshurst, Balskief (Fifeshire), Monacute, St. Catherine's Court, Canon's Abbey, and other manors. In his preface he recognises the great output of popular books on gardens and gardening; but there has been no comprehensive book illustrating the planning and arrangement, together with the architectural and ornamental features of old gardens in both a practical and interesting manner. The author further adds that "there is no doubt that the revival of this form of garden (the formal or architectural), which has made much progress, will be the means of imparting to the country house of the future some of the quaint charm which surrounds the Elizabethan and Jacobean houses, or of that quiet dignity which characterises the more stately buildings of the Queen Anne and Georgian eras." To assist in the revival which he speaks of (which "revival" is news to us), the forthcoming work has been undertaken. He has included none but first-class examples, in order to make his work a lasting record of such subjects as are most worthy of illustration. The plates have, with few exceptions, been prepared by him from his own sketches, drawings, and measurements, and scales are given to the plans and details. Part I. will be issued on December 15, the price (to subscribers only) being 21s. The first part contains forty plates, each 17½in by 13½in, and printed in grey, brown, or green tint, as is best suited to the subject. These printed plates, to judge from the specimen sent, are very beautiful, and taken by themselves will form interesting and useful pictures. The plan drawings, too, are very useful in affording guides to intending designers, and in every respect they are carefully and clearly executed. The publisher will be obliged if subscribers will send him their names at an early date, and will kindly mention the work to friends, to whom he will gladly send a prospectus. Three parts will be issued, namely in December, March, and June, after which the price of the work will be raised. Descriptive matter is given with each part.

Lilies for English Gardens.†

It may strike some as being in a way remarkable that one genus of plants alone should provide enough of characteristics, and have points of interest sufficient to furnish matter upon which a moderate-sized book can be written. Yet when we mention Lilies, and see in front of us a book of seventy-two pages, 5½in by 9in, many of which are devoted to page illustrations, the question arises whether all has been written and said about these beautiful flowers that might be. But then the work is merely an amateur's handbook, and several Lilies known to exist are not named in it, which we consider is unfortunate, as that with very little more expense in any direction would have provided an all-round work of reference. Still, we may expect new editions. Much of the information is compiled from writings published lately in "The Garden," though the authoress contributed some original chapters. In her introduction, Miss Jekyll acknow-

* Formal Gardens in England and Scotland. By H. Inigo Triggs, A.R.I.B.A. Published by B. T. Batsford, 94, High Holborn, London.

† Lilies for English Gardens. By Gertrude Jekyll. Published by George Newnes, Ltd. Price 8s. 6d. net.

ledges the help she has had from Miss Willmott, Mr. G. F. Wilson, Mr. R. Wallace, and Mr. E. T. Cook, while the assistance of the works of Mr. J. G. Baker and Mr. H. Elwes are also notified. Chapters then ensue on "Lilies as classified," with illustrations of the types, and the five sub-genera are each allowed a chapter. In all there are nineteen chapters devoted to culture, propagation, soils, arrangement of Lilies, diseases, and selections for town gardens, together with a variety of other information.

There are sixty-two illustrations, most of them beautifully executed in half-tone blocks, showing the characters of a very large number of Lilies from one or more points of view, or in different conditions. The cultural notes are thorough, and of good practical guidance. We observe, however, that no reference is given when to plant *L. longiflorum*, the "Bermuda" Lily, which receives extended notice in the text. The end of March or early April may be chosen as the most considerate season to plant, or October, in warm, sandy loams. Miss Jekyll does not attempt to be dogmatic in stating any one particular cultural practice for the White Lily. Readers of her book will discover an interesting selection of contradictory evidence from many parties about the treatment of this beautiful yet awfully capricious old favourite. *L. auratum*, so prone to fasciation, is very ably detailed, the writer mentioning how that the young growths are sometimes eaten off by mice, which injury the Lilies seem to accept philosophically, and devote the energy that has been checked above ground to storing a year's additional strength in the bulb. The Golden-rayed Lily is one of those with stem-roots, and should be planted deeply. Shelter from spring frosts is necessary.

Miss Jekyll is usually very careful in applying her descriptions, but ambiguity of expression she is not totally free from, as, for instance, in her repeated references to the Lilies as "things"—"it is a handsome thing," or "a lovely thing," and such similar choice of words. Again, the use of capital letters to adjectival names in the middle of sentences is contrary to the etymological rules of botanical nomenclature. The "strong, faint, disagreeable smell" of *L. pyrenaicum*, as described on page 33, is a delightful instance of extremes that meet!

While enjoying the book, and learning a good deal from it, one would still have liked to find a larger amount of information that could be strictly applied to Lilies away north of the Tweed, and even north of the Trent, for the references to the Lilies as grown up North are considerably too meagre. The completion of the details savours too much of local experience, and one of two famous Lily growers' names are too much played upon. This is not what the practical gardener, at any rate, will appreciate, or our experience of the fraternity is faulty. With its fine illustrations, its up-to-date information, and the numerous varied chapters, this book ought to prove a means whereby the culture and enjoyment of Lilies in our Isles will be stimulated and increased.

Figs Under Glass.

To force pot Figs successfully, the trees must be brought on gradually, and not subjected to too much heat in the early stages. This is apt to occur with bottom heat, the heat about the pots exceeding 70deg; then the trees and embryo fruit come on too rapidly, and often fall instead of setting. Until the leaves are unfolded, the heat at the roots should not exceed 70deg at the base of the pots, then it may be increased to 70deg or 80deg, thus giving a mean of 70deg to 75deg about the pots. The temperature of the house started at the beginning of the month should be increased gradually to 60deg at night, 65deg by day by artificial means, and 70deg to 75deg with sun and moderate ventilation, closing at 75deg. In mild weather a "chink" of air should be admitted early in the day, or between 60deg and 65deg, always at the top of the house, so as to allow the pent-up moisture to escape and insure a change of air, a circulation in the house being favourable to evaporation and solidification of the growths. In cold weather the heat from the hot water pipes will keep the air in motion, and the moisture will be condensed on the glass, therefore ventilation is not then required. Be careful, however, not to bring on the growth too rapidly, especially in dull weather, as foliage produced under such conditions is not of stout texture, but large and thin, possessing little elaborating power, and very susceptible to external changes, often scorching and becoming infested with red spider. Afford water whenever necessary, always equal in temperature to the mean of the house, or that of the fermenting material about the pots. Syringe the trees in the morning and early afternoon, so as to have the foliage dry before nightfall; but avoid excessive moisture, damping the house only in dull weather, and only when the paths and walls become dry.—GROWER.

Pyrus japonica nivalis.

At this busy planting season some of the most beautiful of the flowering shrubs and wall plants that one may have intended to select are sometimes forgotten. Do not let this be the case with the *Pyrus* tribe, some of which are so exceedingly beautiful as to baffle adequate description. The present illustration, on this page, of *Pyrus japonica nivalis* (*Cydonia japonica*), admirably depicts a charming little branchlet studded with the freshly-crisp pure white flowers. There are several other varieties, including a semi-double one, but when *nivalis* is seen in a perfect condition it is indeed a subject of foremost elegance and merit. Small pot plants flower freely in conservatories early in the year.



PYRUS JAPONICA NIVALIS.

Other varieties of the Japanese Quince, as *Pyrus japonica* is otherwise and more popularly named, include *P. j. Maulei*, an exceedingly bright, scarlet-flowered variety that ought to be in every garden; *P. j. princeps*, resembling *Maulei*; and others named *coccinea*, *atro-purpurea*, and *rosea*. The white varieties, *alba* and *albo-cincta*, are largely grown, but *nivalis* is before either of these. The latter, as we have said, is easy to force, and by placing a few plants at intervals of a week or ten days into a warm house a succession of flowering plants can be maintained for some time. Occasionally a few leaves are produced along with the flowers, but as a general rule the latter come first. The usefulness of the Japanese Quince out of doors (on south walls mostly in Scotland) is too well known to require any remark.

An Orchid Wreath.

A romantic American, once a prosperous business man of Cleveland, after living as a hermit for fifteen years in consequence of an unhappy love affair, has been buried in a silk-lined grave. Mr. W. C. Whitney, an old friend of his, put on the coffin a wreath 6ft wide, consisting of 1,000 Orchids.

Apple, Norfolk Beauty.

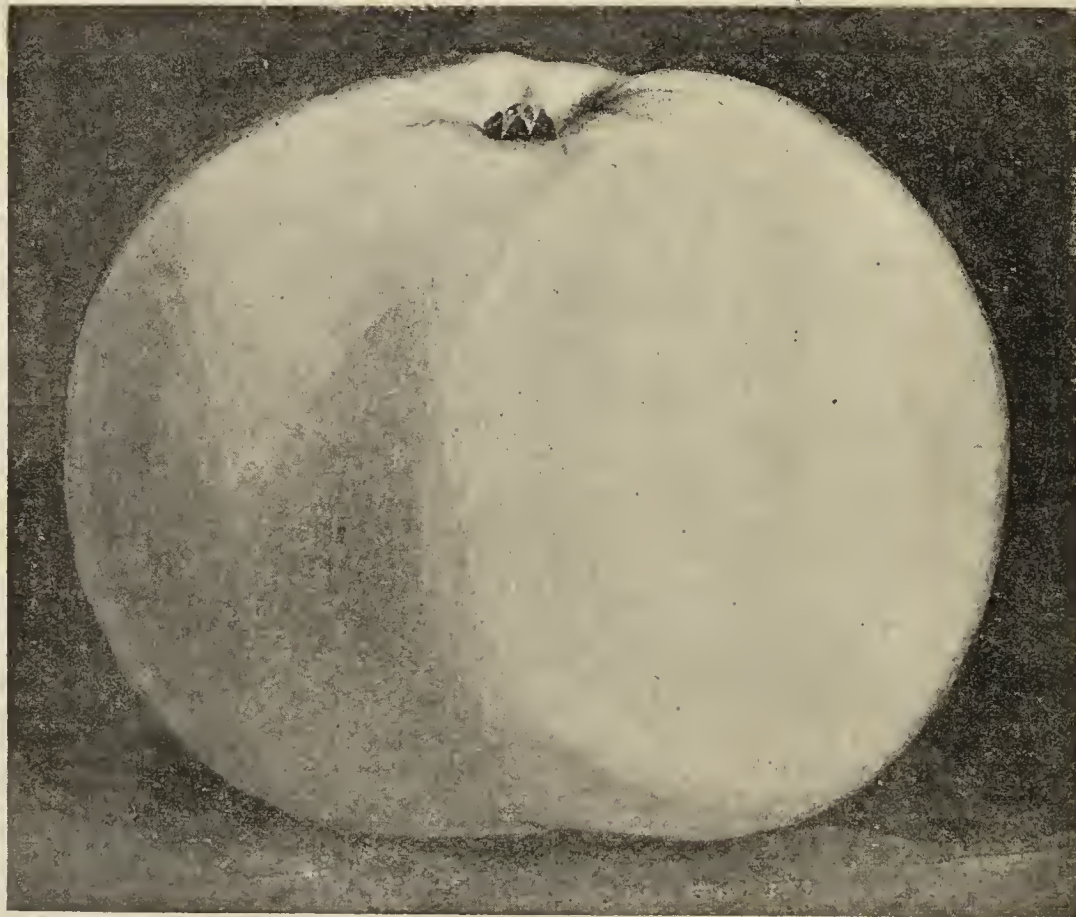
This splendid seedling novelty was raised in the famous fruit garden belonging to the Duke of Norfolk at Gunton Park, where Mr. William Allan so ably maintains the responsible superintendence. He staged a magnificent set of the fruits of Norfolk Beauty at the Royal Horticultural Society's meeting, held in the Drill Hall, on October 15, and on that date received an Award of Merit. The fruits were greatly admired on that occasion, and the variety has been most favourably commented on in the gardening Press. We find this Apple to be most delicious when cooked, which operation requires only about twenty minutes, and the merest simmering is sufficient to cook it well. The flavour is rich, aromatic, spicy, and altogether agreeable and satisfying. When so prepared it is one of the finest Apples we can recall. For eating purposes the same praise-giving expressions can be used. While the pale cream-coloured flesh is firm and good for travelling well, it is at the same time soft and melting on the palate, being luscious, as Apples go, and with a soft, agreeable flavour. Our illustration of this variety on this page is true to nature. The contour is even and rounded, the eye being rather deep-set in a somewhat wrinkled and confined basin, the base infolding, and having a clean stalk, moderate in size. The skin is a pale bronzy-yellow, deeper in tone than that of Golden Noble.

We have received the following interesting letter from the raiser, Mr. Allan, and it will perhaps not be a breach of courtesy to print it in full. He says of the variety:—"It is an excellent Apple for cooking, but requires great care, as it is quickly done, and soon goes to pulp if the oven is fierce. My foreman told me one of the nurserymen said there was no occasion to give it another name, as it was so much like Golden Noble and Waltham Seedling.

Now my experience of the two mentioned is that they are shy bearers, whereas Norfolk Beauty is a great and constant bearer, often producing large fruits on the extremities of previous year's growth, thus giving it a pendant habit. The original tree (now blown over) has never missed a heavy crop; reminds one of Lane's Prince Albert in that respect. You will notice some of the fruits, where exposed to the sun, put on a nice flush; this colour, I am sure, would be more vivid and common if grown in Kent or the home counties. Norfolk-grown Apples do not colour in anything like the proportion they do in the above counties. From a tree grafted three years back one graft perfected ten fine fruits, and probably twenty fruits were thinned off. This Apple has been under my observation now for some years. In the green state—fresh gathered—it has much the character of a Warner's King, as it changes colour toward ripeness it becomes more like a Dr. Harvey or Waltham Seedling. I have now several established trees grafted with it, and shall in a year or two have it in abundance. It often has the bump near the stalk like a Dr. Harvey, also the slightly russet speckling of that variety. It comes into use just after Warner's is over, and will last sound and good till Dr. Harvey comes in. My grafted tree had to be severely thinned this year as well as last, and is now well set with fruit buds for another year.—WM. ALLAN."

Sales of Fruit at Dundee.

The Finance Committee of Dundee Harbour Trust, on November 25, had under consideration an application by a city merchant to rent part of the shed on the south side of King William Dock for the purpose of conducting fruit auction sales. The matter was remitted to a Sub-Committee with powers.



APPLE, NORFOLK BEAUTY (NATURAL SIZE).

Societies.

Royal Horticultural—Scientific Committee, Nov. 26th.

Present: Dr. M. T. Masters (in the chair); Messrs. Houston, Odell, Drucry, Chapman, Sutton, Saunders, Bowles, and Hudson; Drs. Rendle and Cooke; Revs. W. Wilks, and G. Henslow, Hon. Sec.

Plasmodium, remedies for.—With reference to lime as a remedy for clubbing, Mr. Houston observed that with superphosphate the disease tended to increase, as it was of an acid nature; but the converse took place with basic slag, as it was alkaline, and more destructive to the slime fungus.

Cypripedium insigne.—Mr. Odell exhibited a blossom having the two basal sepals distinct, instead of coherent, as is normally the case.

Daphne fasciata.—Mr. Wilks showed an example of this well-known peculiarity. It has lately been stated that the immediate cause of incitement to fasciation is the presence of an abundance of food in an easily assimilable condition.

Diseased Carnations.—Dr. Cooke reported as follows upon the plants sent to the last meeting by Mr. Jas. Douglas:—"They are chiefly affected by the rather new disease caused by *Macrosporium nobile*, figured in the plates for "Hort. Journ.;" a little mixed with

Heterosporium echinulatum, also figured. The disease should be brought under control by picking off diseased leaves, and spraying with ammoniacal copper solution. Liable to spread rapidly from a great power of reproduction it possesses in the fertility of the spores."

Scolopendrium var.—Mr. Drucry exhibited a plant called *S. vulg. Drummondiae superbum*. "It is remarkable for its doubly incised and very fimbriated edges, with a terminal crest. It differs from the parental form, *S. v. crispum Drummondiae*, by a greater development of this fimbriate character and an entire absence of the dimorphous character seen in the original find, which has smooth edged fronds, and somewhat fimbriated ones intermixed. The variety shown is also more markedly aposporous, the fimbriations terminating in aerial prothalli, without being layered. This form is undoubtedly the most beautiful type yet developed in the species,

being finely frilled, prettily crested, and curved sinuously in the plane of the frond."

Australian Rhubarb.—Mr. Sutton regretted that he was unable to show samples, as it has again been cut by the frost. Though flourishing at this season of the year in Australia, it has not yet become acclimatised to frosts in England to be available as a winter crop.

Armeria plantaginea, foliaceous.—Mr. Bowles exhibited a specimen in which the bracts had elongated into leaves, as not infrequently occurs in Plantains.

Lily bulbs diseased.—He also brought bulbs and foliage of the white Lily badly attacked by *Botrytis*, an unusual occurrence at this season of the year.

Lign Aloes.—Dr. Cooke showed specimens of the inner bark of *Aquilaria Agallochum*, smoothed for the purpose of writing upon, from India; also a piece of the semi-decayed and highly resinous wood. The name was given (in Greek *Xylaloë*) to the wood by Aëtius, a physician of Mesopotamia in the fifth century. In Latin it is *lignum-aloe*—i.e., "Wood Aloe," from the astringent and bitter taste, resembling that of the true Aloe.

Azolla, sp.—Mr. Odell observed that in reference to the plant sent by Mr. Burbidge to the last meeting, the species which is apt to spread to a detrimental degree in ponds is *A. pinnata*, and not *A. filiculoides*.

Fruit tree roots diseased.—Mr. Dean, of Wainsford Gardens, Lymington, sent roots of Vines, Peaches, and Figs. Dr. Cooke observed that they were growing in a soil with decayed vegetable matter, in which mycelium of fungi occurred. This then attacks the

roots of living trees, and becomes parasitic upon them. When this is the case the roots must be taken up carefully, thoroughly washed, and replanted in good soil.

Pittosporum coriaceum.—Dr. Masters showed fruiting sprays of this New Zealand shrub, bearing grey, two-lobed berries, full of black shiny seeds. It is a hardy evergreen.

Cephalotaxus.—He also showed a tufted bough of *C. drupacea*. It was probably caused by the attack of some insect.

Mendel's Law.—Mr. Hurst sent the following communication upon the application of Mendel's law to "intermediate" hybrid characters:—"Mendel's law of the dissociation of hybrid characters according to the simple formula $A + 2Aa + a$ was enunciated in 1865, but it was not until a short time ago that the law was confirmed and re-established by the experiments and researches of Prof. Hugo de Vries, Correns, Tschermak, and Webber. In addition to the above we have been favoured with an admirable translation and exposition of Mendel's work in the Journal of the Society by Mr. W. Bateson, F.R.S. Hitherto Mendel's law seems to have been applied to 'discontinuous' hybrids only, and not at all to the more numerous class known as 'intermediate' hybrids. Having for some years past made a special study of Orchid hybrids (which belong for the most part to the 'intermediate' class), I thought that it might perhaps be of some interest to ascertain whether Mendel's law held good in regard to them. A careful analysis of the inheritance of some 3500 pairs of specific characters was therefore made in the following genera—viz., *Cattleya*, *Lælia*, *Lælio-Cattleya*, *Cymbidium*, *Dendrobium*, *Odontoglossum*, *Miltonia*, *Sobralia*, *Zygopetalum*, *Paphiopedilum* (*Cypripedium*), and *Phragmipedium* (*Selenipedium*). These experiments show that, with certain modifications, Mendel's law appears to hold good for 'intermediate' hybrid characters, as well as for 'discontinuous' ones, with the further advantage that the law can be applied to primary hybrids as well as to secondary ones, and to cross-breeding generally, as well as to in-breeding by self-fertilisation. I hope to publish a detailed account of these observations (with your kind permission) in the Journal of the Society at an early date. Should these results be confirmed, the present scope and value of Mendel's law will be considerably extended, and we shall be getting a little nearer towards the solution of the problems of heredity."

National Chrysanthemum Society.—Annual Dinner.

All who have any interest in this, the greatest of the floricultural societies of the United Kingdom, and perhaps of Eurasia, will rejoice to know of the great success that attended the annual dinner celebration, which took place at the Holborn Restaurant, on Wednesday evening, the 27th ult. In the words of Mr. Bevan, chairman of the general committee, there were at least three times the number of supporters present on this occasion, compared with last year; the exact number was said to be 208. This happy result has in a very large measure been gained through the influence and energy of the recently-appointed president of the society, Sir Albert Kaye Rollit, LL.D., D.C.L., M.P., &c., who in this case occupied the chair. Amongst those known to us who were at the tables we observed Messrs. H. J. Jones, J. W. Moorman, J. H. Witty, C. Harman Payne, Richard Dean, Wm. Seward, C. W. Tagg, Geo. Gordon, T. W. Sanders, W. Cutbush, W. Mease, J. T. Simpson, S. T. Wright, J. Wilkinson, G. Norman, Geo. J. Ingram, W. Collins, Norman Davis and Son, J. W. Fleming, P. Kay, B. Wynn, G. Schneider, D. B. Crane, F. S. Vallis, W. Higgs, and S. Mortimer. The Mayors of West Ham, Shoreditch, and Hackney were by the side of the chairman, and gave toasts during the evening.

After a splendid dinner had been served and the company photographed, the chairman's first toast, that of "His Majesty the King," was loyally responded to. His second toast was for "The Queen, the Prince and Princess of Wales, and all the rest of the Royal Family." Sir Albert tactfully referred to the recent tour of the Prince and Princess, and prophesied that the influence of it would be long-lasting and for good. The Danes (in reference to our Queen), he said, had made two great invasions of our land; in the first of which they had left their Viking spirit, and the second had left us a Royal Consort, who had won all our hearts. Speaking of the Empire, the chairman told some humorous stories, of which two may be allowed. One instanced an American, who boasted the great extent of his country. America, he said, was bounded on the east by the unending seas; on the south by the Equinoxes; on the north by the Aurora Borealis; and on the west by the Day of Judgment! However, the British Empire has no bounds at all. An American lady, overhearing some English gentlemen boasting of the Empire that the sun never sets on, asked if she might conjecture a reply. Her cynical retort conveyed it as her impression that the sun never set probably because it might not be very safe to trust us in the dark.

Then came the toast of the evening, that of the "National Chrysanthemum Society." Sir Albert was both humorous and earnest in the remarks he made. He at once thanked the members for having elected him as president, though he rated himself as a humble Pompon amongst the many great Japs!

As a past chairman of the very large botanic gardens at Hull, Sir Albert has had a large experience in the working of a gardening society.

After expressing his pleasure at the Aquarium shows of the N.C.S., and giving voice to a few hints that he thought might with profit be followed up, in introducing newer and tastier forms of floral arrangement, he paid a compliment to the exhibitors of the fine fruits and vegetables. Urging gardeners to greater efforts in fruit culture, he again quoted from America to prove that there our friends are alive. The Yankees say, with regard to fruit: "We eat what we can, and we can what we can't." The history of the society was also briefly reviewed, and figures stating the present number of members and affiliated societies were given. The finances are in a very sound and satisfactory condition. Each of the mayors present received hearty recognition for their having allowed the use of their respective town-halls to the Chrysanthemum societies of their districts; and Sir Albert dilated on the refining and elevating influence that flowers and the culture of them are known to have. "There is nothing better for the individual or the nation," are the words he used. The necessary exercise of patience which plant culture exacts makes better men and women of us all. There might be assistance in the solving of the housing problem if our councillors could induce their fellow-citizens to add the beauty and interest of plant life and culture to their homes. Taking the attractiveness of Chrysanthemums as an example, Sir Albert Rollit jocularly remarked that we enjoy the exhibitions of this flower in the season of densest fogs, so dense sometimes that we lose our way in returning home from the show (as was almost the case at the autumn fête of the N.C.S.!).

It will gladden the hearts of the devoted and partial growers of the flower to hear it described as "the dandy of the floral world"; and surely there is much of truth in this, for, to quote the chairman again, "Chrysanthemums are brushed, combed, and sometimes even the curling-tongs are used," which references our exhibitor friends will quite well understand. Songs by Mr. W. H. Webb's Excelsior Quartette were interpolated between the toasts throughout the evening.

The toast to the society being given, the President presented the National Challenge Trophy (won this year by the Cardiff Society) to Mr. G. W. Drake, the representative from South Wales, and this amidst much cheering. A suitable and modest response came from the recipient, and the fact that Mr. Drake's facilities for growing a collection are of the least inviting nature should furnish a spur to others, who might well enter the competition, but do not. The Holmes' Memorial Cups and medals of the society were then dispersed, one to Mr. F. S. Vallis and another to Mr. W. Higgs, the latter having to his credit a quartette of success in the same competition, which should be followed, as the chairman said, by a quart of another kind! Messrs. H. J. Jones, Cutbush, Pulling, B. S. Williams, and others, received medals, amidst continued loud cheering and hilarity. Various long-winded and irrelevant speeches came from the mayors in turn; and Mr. Thomas Bevan replied at length to the toast of "The President, Vice-President, Officers, Auditors, and Committees of the Society." Though the Midland Chrysanthemum Society was unrepresented, the secretary of it sent a telegram of apology to the meeting at the unavoidable absence. A very crisp and interesting speech was delivered by Mr. C. Harman Payne, honorary foreign corresponding secretary. Mr. Payne is what an outsider would probably term a bigoted Chrysanthemumist; he certainly is a very zealous one, and always upholds the high prestige of the National Chrysanthemum Society as above all other floricultural societies in the kingdom. He caused surprise by saying there was only one Rose society, while there are 400 furthering the interest in the "Golden Flower." In this statement he was afterwards corrected by the president of the Windsor and Eton Chrysanthemum Society, who happens also to love Roses as well as the flowers of the "Autumn Queen." The National Rose Society, moreover, in Mr. Payne's eyes, "is mostly composed of old spinsters and country clergymen"; and, further, "for every one Rose-grower in this country, there are five hundred growers of Chrysanthemums." He then referred to the French N.C.S., and to French raisers of seedlings, it having been a Frenchman who first learned how to raise English seedlings in England, and ended by saying that our home commercial growers are following hard on the tracks of the Continental men in raising novelties. Mr. George Schneider responded to the toast of "The Visitors," proposed from the chair. Mr. T. W. Sanders gave "The Royal Aquarium Summer and Winter Garden Society and Donors of Special Prizes," replied to by Mr. Josiah Ritchie, chairman of the Board of Directors, who are the largest donors; Mr. J. W. Wilkinson, with a toast to "The Ladies," and Mr. J. H. Witty, who eulogised the services of "The Press." Flowers were lent for the tables by various friends. The large company, including very many ladies, thoroughly enjoyed what was a highly varied and interesting evening, and the hope may be expressed that so large and representative a gathering may again meet next year.

Winter Exhibition, December 3rd, 4th, and 5th.

The Royal Aquarium was again the venue of the winter show held by the society. There was a large number of trade exhibits, and cut blooms in the competitive classes were mostly very creditable.

Open Classes: Cut Blooms.

Eight competed in class 2 for twenty-four Japanese varieties, not less than eighteen sorts. Mr. H. Weeks, Thrumpton Hall Gardens, Derby, led off with good blooms for the time of year. His best samples included Madame Carnot, G. J. Warren, H. T. Burrows, a fine rich chestnut bronze flower; J. R. Upton, Madame Cadbury, Mrs. Bagnall Wild, a deep rich yellow; Florence Molyneux, and Mrs. Mease. The second award was secured by Mr. W. C. Modral, gardener to Colonel F. Shuttleworth, Old Warden Park, Biggleswade, with smaller and less shapely blooms. Mr. R. Kenyon, gardener to A. F. Hills, Esq., Monkham, Woodford Green, formed a fair third. For a dozen distinct Japs Mr. J. Turk, Ponfield, Hereford, led with large blooms; Mrs. Barkley, Madame Carnot, and Pres. Borel were the best. Mr. R. Kenyon followed for second, and staged a very fine bloom of Loveliness; third, Mr. W. C. Modral with fresh and good samples. An extra prize was given to a set from Mr. J. H. Goodacre. There were seven entrants in all.

Incurveds.

That champion in the culture of incurved Chrysanthemums, Mr. W. Higgs of Fetcham Park, led off again in the class for a dozen blooms of this section in six varieties. The flowers were perfect, or as near it as may be. The most conspicuous varieties were Madame Lucie Faure, Ialane, Bonnie Dundee, Frank Hammond, Egyptian, Ralph Hatton, and Miss Phyllis Fowler; the latter exquisite. Out of ten exhibits in this class Mr. W. Neville of Cornstiles, Twyford, Hants, came second, but was much behind Mr. Higgs' lot; third, Mr. J. H. Goodacre, Elvaston Castle, Derby, with respectable blooms; and an extra prize was accorded to Mr. John Aplin, Hasfield Court, near Gloucester.

Bunches of Blooms.

Class 6 asked for twenty-four bunches of Chrysanthemums, any section, for prizes of £2, £1, and 10s. Here Mr. John Aplin was forewinner, the Japs and incurved blooms being in trios in brown vases. Mr. W. Howe, Park Hill, Streatham Common, formed a strong second. There were eight or nine competitors, but the entries were difficult to define. Numerous comments on the beauty of the vase style of staging were made, and not all favourable either. More space is required, and also more greenery. For a dozen bunches of Japs in six varieties, three blooms in each vase, the first prize was gained by Mr. W. C. Modral, the stems of whose blooms seemed rather bare to obtain a first at an Aquarium show; the blooms were good, however. For six bunches of Chrysanthemums, any varieties (class 21), the premier award was secured by Mr. W. G. Prudden-Clark, York Road, Hitchin. A third prize went to Mr. A. Taylor, 9, Vernon Terrace, East Finchley.

In class 8 Mr. W. Tipler, gardener to Miss Smith Dorrien, Hartwell Villa, Aylesbury, beat Mr. J. Kirkwood of Grass Park House, Finchley, for six bunches of Japs in distinct sorts. Mr. W. Trowell Fairlight, The Avenue, Beckenham, formed a good third in the same class.

Class 9 was bright and fresh, being devoted to the large-flowered singles, of which six bunches were asked. Mr. G. W. Forbes, Regent House, Surbiton, had the finest half-dozen, his varieties being Kate Williams, Rudbeckia, Violet Baylis, London Beauty, Black Prince, and Yellow Giant. The second place was filled by Mr. A. Page, Ravenscroft, Moss Hall Grove, North Finchley, with fine vasefuls. Mr. F. Bush, Rose Hill, Totteridge, made a fine third, out of nine entrants.

Mr. D. B. Crane and Mr. W. C. Pagram were the only exhibitors of six bunches of small-flowered Pompons; winning in this order.

Vases.

In class 13, for a large vase of Chrysanthemums Miss C. B. Cole, so well known in this section at Aquarium shows, was first, but displayed too much bare stem. Mr. D. B. Crane had a much taller vase filled with yellow blooms, and having Croton leaves below. The third award went to Mr. J. Kirkwood, Grass Park House, Finchley, with a rich and imposing arrangement of large blooms and massive sprays of Asparagus, Grevillea, and Cyperus alternifolius. Six entered. Miss C. B. Cole again won for a vase of pompon flowers and coloured foliage; Mr. W. C. Pagram coming second. Six again entered here.

Single-handed Gardeners.

Class 16 was devoted to the above, the prizes being given by C. W. Richardson, Esq., Fairgreen House, Sawbridgeworth. Mr. W. Tipler, gardener to Miss Smith Dorrien, Hartwell Villa, Aylesbury, led first with exceedingly creditable blooms. Mr. A. Page, Ravenscroft, North Finchley, came as a good second; and third, Mr. A. Freeman, Reveley Lodge, Bushey Heath.

Amateurs' Classes.

Eight competitors staged each a vase of the flower arranged with foliage. The prizewinners here (class 19) were Mr. T. L. Turk, Mr. H. Pestell, and Mr. C. H. Martin, each with very tasty displays.

For a dozen Japs, distinct blooms, Mr. A. Freeman, Bushy Heath, stood foremost. Mr. W. Tipler was a very close second; and Mr. A. Page formed a strong third. The prizes in class 20 went as follows:—1st, to Mr. Ernest C. Horsey, Goff's Oak, Cheshunt; 2nd, to Mr. W. G. Prudden-Clark, Hitchin; and 3rd, to Mr. W. Gooding, Four Elms, Edenbridge, Kent, all with fine blooms. Mr. C. Cox, The Grange, Brikendon, Kent, led for six Japs in class 18.

Miscellaneous Plants.

For a collection of flowering, berried, and foliated plants in the open class, Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham Common, was the only exhibitor, but had a tasty display, including Bouvardias, Crotons, Acalypha hispida, berried Solanums, Poinsettias, Begonias, Ferns, and Cypripediums. He also won in a class for an identical entry, but this was not open to nurserymen. He here staged Narcissus, together with Roman Hyacinths and the other usual plants.

In class 24, for six flowering Begonias, the first and second prizes both went to the Maidenhead district; first to Mr. John Fleming, gardener to Lady Pigott, Wexham Park, Slough, with samples that stood 2½ft to 3ft from basal foliage to the top of the plants, and almost as broad. They were exceedingly creditable to the grower. Mr. John Fulford, gardener to F. D. Lambert, Esq., J.P., Moor Hall, Cookham, came second. A small silver medal was given as a special award for good culture in the case of Mr. Fleming's plants, which were grown in 7-inch pots, the cuttings struck in May last.

Miscellaneous Trade Groups.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, occupied his usual position, and had another of his beautifully arranged groups. A bunch of single spidery variety named Thirza Cherry, pale mauve flowers, caught our attention. The Duchess, an incurving pale creamy Jap, was also good; Canary Bird is a fine yellow decorative sort; and amongst exhibition varieties may be mentioned the following:—Geo. Lawrence, bronzy-red; Major Plumbe, golden; Mr. Louis Remy, Mrs. A. Tate, Mrs. Richard Clayton, Edith Shrimpton, Mrs. J. Bryant, Ella Herxheimer, Henry Stowe, and W. H. Whitehouse. (Gold medal.)

The Monkham Nurseries (manager, Mr. R. C. Pulling), Snake's Lane, Woodford Green, had a grand display of blooms in vases. The best varieties included fine samples of Julia Scaramanga, Mme. Carnot, Mrs. Mease, Frank Hammond, and W. H. Whitehouse. (Large Gold Medal.)

Mr. G. Lange, nurseryman, Hampton, exhibited a group of Begonia Gloire de Lorraine and the white sport named alba grandiflora, obtaining a small Silver Medal.

Mr. Norman Davis of Framfield, Sussex, completely filled the western fountain with massive and well-arranged flowers and some plants. His blooms of the sweet pink or mauve pink variety named Framfield Pink was much admired. There were also fine specimens of the Carnot family; Madame R. Cadbury; C. J. Mee (new, 1902, bronzy-canary); M. P. Radelli; and the deep rich yellow decorative variety named King of the Plumes. (Large Gold Medal.)

Messrs. Austin and Co., St. James' Works, Kingston-on-Thames, received a Gold Medal for a display of bottled fruit similar to that shown by them in the Drill Hall on the occasion of the Royal Horticultural Society's last meeting.

Messrs. H. Cannell and Sons, Swanley, Kent, once again displayed Zonal Pelargoniums in bunches. The brightest varieties were:—Jealousy Improved, scarlet crimson; Mary Beaton, white; Mme. Charotte, semi-double rosy-pink with white edge; Gustav Emich, semi-double rich crimson; The Sirdar; Barbara Hope, blush-pink, white edge; Lord Roberts, deep amaranth purple; and Lady Roscoe, a charming peach-pink. They also staged Chrysanthemums and a magnificent display of fresh vegetables. (Gold Medal.)

Messrs. J. Laing and Sons, Forest Hill, S.E., again on this occasion sent up a very large and fine assortment of Apples and Pears, representing the leading and well-known varieties. They were deservedly awarded a Gold Medal.

Messrs. William Clibran and Sons, Altrincham, staged an exhibit of single Chrysanthemums, all of excellent quality. Here we noted a large assortment of seedlings, some of which have already obtained certificates. The varieties were:—Mrs. F. Leah, pure white; Miss Emily Hall, mauve-pink; Miss Jessie Haworth, after Mrs. Filkins type; Mrs. F. C. Warden, a stouter white than Mrs. F. Leah; Ethel Robinson, rose-purple; Mrs. Mark Worlard; Lady Windsor (one of the best), white halo round disc, and purplish edge; Mrs. R. J. Lockhart, crimson-chestnut; and Doris E. Shears, white, the edge purplish. (Large Silver Medal.)

Messrs. Cutbush and Son, Highgate, London, N., staged

retarded Lilies (*L. longiflorum*), *Erica hyemalis*, *Epacris*, *Pernettyas* (finely berried), Lily of the Valley, *Spiraea japonica*, *Begonia Gloire de Lorraine*, and foliage plants. (Silver-gilt Medal.)

Mr. G. Collins, 7, Milverton Street, Kennington, staged a large selection of wire frames for wreaths, crosses, harps, columns, stars, bouquets, &c. Their wirework is stout and well finished. (Bronze Medal.)

Messrs. A. W. Young and Co., The Nurseries, Stevenage, Herts, staged a collection of outdoor varieties of *Chrysanthemums*. (Vote of Thanks.)

From Messrs. Cutbush came a box for carrying exhibition Grapes. The advantage here is in having wire hoops that are fixed to a stout board at the bottom. This board has two cross boards that slip into a made groove, and so keep the hoop erect and steady. The Grapes are fastened from the hoops.

Messrs. W. and R. Owen, Maidenhead, set up a group of Chinese *Primulas* of the large fimbriated flowering strain. Some of the colours were pleasing and unique. (Small Silver Medal.)

Mr. Eric F. Such, the Royal Berkshire Nursery, Maidenhead, staged a collection of Apples, *Begonia "Gloire,"* and cut *Chrysanthemums*. (Large Silver Medal.)

Floral decorations on an elaborate scale were put together by Mr. L. H. Calcutt, nurseryman, Stoke Newington. Mirrors were largely employed, with stonework and overhead arches covered with flowers and *Smilax*. (Gold Medal.)

Mr. W. Howe gained second prize in class 1 for six trained specimen plants.

A few new varieties were certificated, namely:—

Blush L. Canning (Messrs. W. and R. Owen).—A blush sport from *L. Canning*, but very pale in colour. (First Class Certificate.)

C. J. Mee (H. Weeks).—A large deep golden Japanese variety, with reddish overlay; petals with reflexed turn and moderate in breadth. (Award of Merit.)

Little Jewel (W. J. Godfrey).—One of the Mrs. Filkins type, pale creamy-yellow, with wiry petals; a very pretty little variety, having abundance of its small flowers. (Award of Merit.)

Sandown, Isle of Wight.

An exhibition of *Chrysanthemums*, fruits, and vegetables was held at the Town Hall on Wednesday, November 27. This was the first of the kind held here, and considering such a short notice was given of holding the show, it was in every way very satisfactory, being inaugurated by Mr. A. Douglas and Mr. W. W. Baker with the object to benefit the popular Sandown Band, whose presence in the afternoon and evening enlivened the proceedings and delighted the large assemblage present. For so late in the season some good flowers were shown, notably seedlings by such famous raisers as Mr. Martin Silsbury, the raiser of Mrs. White Popham, Lady Isabel, Mrs. J. J. Thorneycroft, and other good varieties. He was first in the competitive classes, and he also exhibited a stand of twenty-four Japs containing some very promising seedlings. Mr. Martin Silsbury was the premier entrant with a good bloom of Pearl, blush pink, with a deeper margin to the florets, reminding one of old Belle Paule.

Mr. H. Love also exhibited a good stand of cut blooms with vases of flowers and other decorative plants, among them being some promising seedlings of Mr. J. Bryant, the raiser of many good varieties that have found their way on the exhibition table, one of the best of this year being Princess Henry, named after the Royal Governor of the island. It is a seedling from Mrs. White Popham crossed with Hairy Wonder, and having the character of both parents; this will make a fine exhibition variety.

Mr. Perkins, gardener to E. Drabble, Esq., Los Altos, exhibited a fine stand of cut blooms, Grapes, and other fruits. Mr. Walter Gibson decorated the front of the stage with a fine bank of flowering *Chrysanthemums*, Palms, and other decorative plants.

Messrs. Cutbush and Sons, Highgate, London, sent an attractive group of plants, retarded Lily of the Valley and *Lilium longiflorum* being very fine; also *Begonia Gloire de Lorraine* and the new *B. Turnford Hall*, *Ericas*, &c.

Messrs. Toogood and Sons, Southampton, also had a select stand of roots and seeds, some fine Onions being shown. There were some very fine vegetables in competition, and also some good collections non-competitive, Mr. Banks, gardener to Lady Isabel Atherley, Languard Manor, taking chief honours for fruit and vegetables.

Messrs. G. Bunyard and Co., Maidstone, sent a small collection of beautiful Apples, which were much admired.

Messrs. Walter Gibson and C. Orchard were the judges, and were enabled to congratulate the committee on the very successful show.

Cardiff Gardeners'.

The fortnightly meeting took place at the Grand Hotel on November 26, Mr. F. G. Treseder in the chair, when Mr. H. R. Farmer, foreman of the Castle Gardens, delivered a lecture entitled "The Culture of Herbaceous *Calceolarias* and *Cinerarias*." The lecture was full of interesting details regarding these easy growing plants. Great stress was brought to bear against coddling them at any stage of growth. The debate was opened by Mr. Graham, and enthusiastically taken up by most of those present. Eventually Mr. Farmer replied to the various questions which had been put to him. A very hearty vote of thanks was accorded the lecturer for his splendid address. The association's warmest congratulations was accorded Mr. Drake for securing the N.C.S. affiliation prize (a shield), see report of annual dinner, who had won it solely with his own produce. Also to Mr. Graham, who had won the N.C.S. medal at Cardiff, a silver cup at Newport, and the gold medal at Swansea, for *Chrysanthemums*. The chairman then announced that on December 10 Mr. J. M. Gerhold would deliver a lecture entitled "Notable British Homes," illustrated with limelight views.

Irish Gardeners' Society.

The usual meeting of the above was held on Tuesday last at Grafton Street. The subject was "The Pollination of Flowers," illustrated by limelight views, by Professor Pethybridge. Though strictly speaking not a lecture, it was more a lantern demonstration pure and simple, he projecting something over sixty slides. He briefly pointed out the structure of a flower, the principal parts being fully considered; then showed a series of diagrams of varied types of stigmas, and the anthers with pollen grains were adequately illustrated. The great dissimilarity existing, and also the peculiar appendage of bladders attached to pollen grains of Pines, showed how wind-fertilised plants are ensured in this essential. The botanical features accruing from the fact of hybridisation were duly dealt with; showed when the receptive stigmatic surface had been fertilised, the emission of pollen tubes ensued, and enabled the formation of the ovum in seed vessels, also diagrammatic sections, which brought the botanical aspect to a conclusion. He then dealt with the various contrivances by which Nature ensures insect visitation, yet prevents injurious insects to clamber and do more harm than good. *Valisneria spiralis* mode of reproduction and several other types were shown. Subsequently, Mr. F. W. Burbidge, M.A., descanted on the value of hybridisation, and was the proposer of a vote of thanks to the lecturer, and after other votes of thanks were passed, the meeting adjourned. There was a large gathering of horticulturists, many having travelled a considerable distance to listen to the lecture.

Bristol Gardeners'.

It is not every gardeners' association that can boast of having its own consulting entomologist, to whom its members may go to for information on any of the many insects with which the gardener has to grapple. The Bristol and District Gardeners' Mutual Improvement Association is certainly in the front rank in this respect by having the services of Mr. W. G. Smith, F.E.S., of Knowle, at their disposal, who has generously consented to aid the society free of all charge, on any subject connected with insect life. It was with great pleasure that the Association of Bristol and District Gardeners availed themselves of the opportunity on Thursday evening, a week ago, in hearing Mr. Smith give his lecture on "Ants and their Ways." It need hardly be said that his lecture was a most interesting one concerning these extremely busy, and we may say in the words of the lecturer, intelligent insects. He gave every detail of the ant and its mode of working, in a very clear way. The different species in Asia, Africa, America, and Europe were minutely described. Their modes of government especially was most interesting, showing that even ants have their rules and regulations quite as much as we ourselves. With the aid of lantern slides the lecturer was able to illustrate the ways of these insects, which added greatly to the evening's enjoyment. Mr. Smith claimed for the ant that it was not altogether so bad as it was painted, mentioning several insects which infest plant life to be food for the ant; such as green fly and others. He was heartily voted the thanks of the meeting for his able paper. The chairman for the evening was Mr. A. J. Hancock. The prizes for the evening were for two bunches of Grapes, the competition for which was very keen. They were awarded as follows:—1, Mr. J. B. Brain (gardener, Mr. J. Atwell); 2, Mr. T. J. Lennard (gardener, Mr. E. Andrews); 3, Alderman W. Howell Davis (gardener, Mr. Curtis); 4, Mr. T. F. C. May (gardener, Mr. Jennings); Messrs. Binfield and Skinner being highly commended. Certificates of merit went to Mr. Skinner for a group of *Begonia Gloire de Lorraine*, and Alderman W. Howell Davis (gardener, Mr. Curtis) for *Oncidium sphacelatum*.—H. K.

Scottish Horticultural Association.

The last meeting of the year was held on Tuesday evening, the 3rd inst., in 5, St. Andrew's Square. Mr. Comfort, president, occupied the chair, and there was a very large turn-out of members, nearly 100 being present. Mr. George Wood, gardener at Oswald House, Edinburgh, read a paper on "Palm Culture." Mr. Wood gave in short but vivid detail his method of culture, and described the sorts that he most highly recommended for conservatory and house decoration. Mr. Wood is a strong advocate for culture in small pots, and his methods are on usual lines as to soil, feeding, &c. The paper was well received, and elicited a lively discussion. A cordial vote of thanks was awarded Mr. Wood, on the motion of Mr. A. Mackenzie. A number of interesting exhibits were on the table, including several very handsome Palms in 4in pots in illustration of his paper. Mr. Todd, Musselburgh, exhibited a vase of very pretty red Roses (Général Jacqueminot), which were much admired, and for the season were very good blooms, cut from the open garden after having stood 12deg of frost. Mr. Todd also showed a very handsome vase of white Chrysanthemums, Souvenir d'une Petite Amie, of decorative size. Mr. Chaplin exhibited handsome Onions and Carrots. A very beautiful double Violet was exhibited by Mr. Henderson, gardener Fullarton House, Ayrshire. It is a seedling raised at Fullarton, and named Mrs. Matthew Arthur, which was much admired, and Mr. Henderson was asked to show plants showing its habit on some future occasion. About a score of new members were proposed. A vote of thanks to the chairman brought the meeting to a close.

Young Gardeners' Domain.

HINTS FOR YOUNG HEADS.

(Continued from page 365.)

Truly some of our young fellows use that invaluable instrument, the syringe, in a marvellous manner. Evolution, it may be, of principles which govern the small boy's squirting propensities, anyway the display of energy shown in furious fire-engine drenchings of tender foliage is prodigious, but it is not gardening. Much water and little good. The syringe in the hands of a capable performer is made to reverse this order, the ejection of a fine spray to the under parts of a plant being the desideratum; frequency, and time of syringing depending upon season and weather. From mid-spring until late summer, twice daily, early morning and at closing time—closing the ventilators is generally necessary according to atmospheric conditions both inside and out, for the relation of natural conditions prevailing outside to those obtaining inside must be conjunctively considered. It is ever the good plantsman's desire to have pure soft water for syringing purposes, nothing being more detrimental to the appearance, if not to the health, of plants than a limy deposit on the foliage. At rare intervals only, on parching days with free ventilation, a thorough douche by pressure from a hose-pipe may be advantageously given, but with the shortening days of autumn the caring hand will be a sparing hand in the matter of even legitimate syringing, yet given favourable weather, a daily application well before noon, with ventilators open till the usual closing time, is good practice.

"A bad workman finds fault with his tools," is an old saying, and often true; but, in context, it may be added, the smart workman takes a pride in them, and is pardonably jealous of their going into any other hands but his. Old boys may laugh at the lad who hides his syringe, or is caught surreptitiously polishing it up in his dinner hour, yet he is not only to be commended for his care, but "heads" would do well to encourage such ownership with its attendant responsibility by allotting to each as far as practicable his own tools; probably finding it would abolish some of those little worries of life which they of all men seem especially heir to. In fact, the same principle carried throughout the garden is an excellent plan, for everybody's tools are nobody's tools, and that nimble nobody, so hard to catch, is too utterly irresponsible for a place on the garden staff. Few boys seem capable of packing a syringe and keeping it in smooth working order. Yet no disparagement of youthful resource is intended, for it is only fair to add that all sorts and conditions of packing, from raffia to a rotten bootlace, have been seen doing duty. The ingenious one who used the latter, chuckling with mirth as each back stroke shot the water up his arm, finally gravitating to the laceless boot. However, a better way with the ordinary pattern, say Reed's, is to wind common worsted evenly and tightly between the flanges of the plunger, and lubricate with Russian tallow; this acts admirably when properly done, although it stops the mirthful enjoyment of backchuting.

"Cleanliness is next to Godliness." This ancient adage seems almost a truism in gardening, and in no phase of it is its im-

portance more conspicuous than in plant culture, hence some prominence may be given to it here. In many gardens, and good gardens too, the endless operation of plant cleaning seems to be always more or less in evidence. Always cleaning, never clean, and the cleaner gets no "forrader." This, in allusion to perennial pests, such as mealy bug and scale, which, too many can say, are, like the poor, always with us. It has been insisted that once a plant-house is infested with mealy bug, it is impossible to be entirely rid of it. Would that our young fellows would strike out for once and for all such impossibilities from their creed and inscribe in the articles of their faith, "Those can conquer who believe they can." That the matter is a difficult one is not denied, but each difficulty is—and mark well, young friends, each difficulty is your opportunity, and the greater the one the grander the other. How sweet are triumphs of mind over matter! It is almost superfluous to remark that most young gardeners know the potent remedies employed to rid our plants of all the beasties that prey on them, but in knowing what to do, do, I beseech you—and this, Mr. Printer, you might be able, in the words of Dickens' dying boy, "Jo," to print "uncommon precious large, p'raps"—do have the energy to do it.

"I don't care what you say," said a bug-infested, old-time gardener, whose acidity of temper curdled his common sense into further blurring out, "whosomdever argufys wi' me like that is a synagogue"; a syn-a-gogue. (The repetition in accentuated syllables.) What the bug-ridden one meant by that was, of course, everything that was bad; and he meant to close the argument, and he did. "Desperate diseases require desperate remedies." The most drastic measures of cleaning and painting all internal woodwork of an infested house are in bad cases vitally necessary. It may be inferred, too, that a great scrubbing and tubbing of pots and plants will be given, then a good beginning has been made, but a beginning only. With my ancient friend it was the beginning and the end of each operation, to be ever and anon repeated. Now is the time for our lad in charge to show his mettle. If he really rises to the occasion, in twelve months, possibly six, he may honestly assert that the house is clean; neither "pretty clean" nor "fairly clean," but clean without qualification. What a relief! To effect this a daily investigation must be made, but it need occupy but a few of those spare minutes that even the busiest bodies can find. With a small bottle of methylated spirit diluted with a little water, if too strong, for it is apt to vary in quality, and a large camel's-hair pencil, known as a dab, inserted through the cork, the remedy is always ready. Keep it handy. Keep a bottle for use in every house, and—use it. This is for light skirmishing with the enemy, and it is astonishing what can be done in sniping off the slim ones with the dab and spirit.

As wet weather or other opportunity affords, an odd field day with the hand-sprayer and some good insecticide diluted with warm water will take place which, with an occasional fumigation, or rather vaporising now in vogue, and infinitely preferable, will eventually bring the fight to a finish. Fir-tree oil, in warm water, according to instructions, makes a splendid spraying solution, leaving the foliage bright and clean. Gardeners are always learning, and it was but recently observed that where some of the warm solution had trickled down through the ball of a plant, a number of small worms, which happened to be at home in it, wriggled to the top, where they performed a last lively penance for their very small error. Further trials on a common Maiden-hair Fern gave the same results, without injury to the roots. Fir-tree oil, or similar preparations, is preferable to those insecticides which require an after washing off with clean water. Scale on Palms, or on the leathery leaves of Orchids, which sticketh closer than a brother, can have no more effectual treatment than with the dab and bottle, for after a few applications the spirit "moves 'em."—AN OLD BOY.

(To be continued.)

Guernsey Crops and Prices in 1901.

The season just closing has not on the whole been a bright one for Guernsey growers generally, the very high price of coal last winter acting as a great deterrent to early spring forcing, consequently there was a considerable shortage of early Tomatoes and Grapes. This caused a great extra bulk of stuff to be shipped during the latter part of July and all through August and September (the time of the general glut), resulting in very low prices being obtained. Grapes have, in proportion, done much worse than Tomatoes, many of these, probably owing to the abnormally dry summer, having finished badly, and been poor in colour. The spring flower season, too, was disappointing, inasmuch as the bulk of our Narcissi crop elashed with that of the Scilly Islands, France, &c., causing very poor returns to the growers. Chrysanthemums have done somewhat better till we were visited on the 15th ult. with a storm of sleet, followed by a sharp frost, which practically destroyed all the Chrysanthemums blooming out of doors. I hope the season 1902 will make amends for the shortcomings of this.—X.



Fruit Forcing.

CUCUMBERS.—Foggy, wet, and dull weather, alternating with windy, frosty, and bright intervals, tax the energies of the plants severely, growth being very unsatisfactory. Keep the glass clean, both inside and outside, for every ray of sunlight is of consequence. Use sweet, warm soil, and not very wet, for earthing-up the roots, covering them lightly, as showing at the sides of the ridges or hillocks. A few sweetened horse droppings with an occasional light sprinkling of soot spread on the surface will attract the roots, and afford nourishment to the plants when watered. This is preferable to liquid manure, unless the plants are growing in very small beds, or confined to boxes or pots, then copious supplies will be necessary. Always apply it weak and tepid, and not too often. Sufficient moisture will be secured by damping the paths and walls in the morning and afternoon of fine days; but avoid an excess, and do not afford water at the roots until the soil becomes dry, yet before the foliage flags for lack of a supply, then give a thorough watering. Look over the plants at least once a week for stopping, removing bad leaves, thinning as required, but neither stopping nor thinning will be much needed; yet these must not be neglected, as crowding is one of the greatest evils in the growth of winter Cucumbers.

MILDEW is sometimes troublesome at this time of year. It may be combated by dusting the affected parts with flowers of sulphur, and the atmosphere should be kept drier. A light brushing over the hot water pipes with a cream of sulphur and skim milk is useful against mildew, red spider, and white fly. Thrips and aphides are best destroyed by fumigation with tobacco paper, or vaporisation with nicotine compound. Tobacco powder dusted on black or green aphides destroys them, and fumigation on two or three consecutive evenings eradicates these pests.

PEACHES AND NECTARINES—EARLIEST FORCED TREES IN POTS.—To have fruit at the earliest possible time, and without overtaxing the trees by very hard forcing, they should be started without loss of time to ripen the fruit at the end of April. Only the very early varieties will do that, such as Alexander, Waterloo, Early Beatrice, Early Louise, and Early Leopold Peaches; Advance, Cardinal, and Early Rivers Nectarines. These embrace varieties with both large and small flowers, so that there is no difficulty in securing pollen for cross-fertilisation. The trees do admirably in a three-quarters span-roofed house facing south; quarter, half, and full standard trees being grown so as to have their heads near the glass. Tomatoes can be grown against the back wall for an early supply of fruit, and when the Peach and Nectarine trees go outside, the house will be at liberty for Tomato plants in pots. The fruit trees require the same treatment as trees in borders.

EARLIEST FORCED PLANTED-OUT TREES.—The trees started in December, or at an early date in previous years, swell their buds promptly without incitement from artificial heat, but those forced for the first time are slower in starting into flower. To have ripe fruit in May, and the trees being of the second early or midseason varieties, and not before early forced, the house must now be started. They must not be hurried, but given time to advance steadily, and develop a strong flower, perfect in all its parts. The proper procedure is to admit a little air constantly at the top of the house, and above 50deg it should be increased correspondingly with the temperature. Do not allow a decline below 50deg in the daytime, sufficient artificial heat being employed for that purpose, and with sun heat an advance may be allowed to 65deg, closing for the day before the heat has receded to below 55deg. A temperature of 40deg to 45deg at night is ample, or in mild weather 50deg.

When the flowers are advanced so as to show the anthers, cease syringing, but afford a moderate amount of air moisture by damping the borders, paths, and walls in the morning and afternoons of fine days. Avoid a close, moist atmosphere at any time, especially at night. Examine the inside border, making sure that there is no deficiency of moisture. If necessary, afford a supply of water or liquid manure to weakly trees. The surface soil is often deceptive, being kept moist by syringing, therefore supply enough to moisten the soil through to the drainage, for surface moistening does little good. Trees often have weakly blossoms, and fail to set the fruit, in consequence of water being given to the tops of the trees instead of to the roots. Remember a sodden soil is just as bad, or worse, than a dry one; as it promotes a sappy, unfruitful growth and disease, therefore guard against extremes either way. If there be a superabundance of blossom buds, remove those on the under side of the trellis or

shoots by drawing the hand the reverse way of the growths. This will materially assist the swelling of the remaining buds. If there be any trace of aphides, fumigate the house on two or three consecutive evenings. Protect the outside border with leaves and litter, but not so thick as to heat, for the roots cannot work in frozen soil.

SECOND FORCED HOUSE.—If the trees are very early varieties, such as Alexander, Waterloo, Early Beatrice, Early Louise, and Early Leopold Peaches, Cardinal and Advance Nectarines, fruit may be had early in May by starting the trees at the new year, but if the trees are such as Hales' Early, Dr. Hogg, Early Alfred, A Bec, Stirling Castle, Royal George, Dymond, or Grosse Mignonne Peaches, Early Rivers, Lord Napier, Stanwick Elruge, and Humboldt Nectarines, the fruit will not ripen until May is well advanced, or early in June. This must be taken into consideration by growers. In either case the house where the trees have not been forced before must be closed at once. Fire heat must only be used to exclude frost, the trees being sprinkled occasionally, or on fine days in the morning and afternoon, allowing time for them to become fairly dry before night. Keeping the trees constantly dripping with moisture, especially at night, enfeebles the blossoms, and is provocative of wood-bud rather than of blossom-bud development. Do not allow the temperature to exceed 50deg in the daytime without full ventilation. Supply water or liquid manure to inside borders, and protect outside with some leaves and a little litter over them.

SUCCESSION HOUSES.—Where the roof-lights are moveable, it is much the best plan to remove them, and expose the trees to the elements for the winter, the wood being thoroughly ripe. This is inimical to many insects, especially brown scale, and the trees are insured complete rest and thorough moistening of the border. Even the latest and unheated houses are best treated in that way, often having the effect of causing trees to retain their buds, which cast them under fixed roofs, and the blossoms are generally finer on trees that are exposed than on those that are kept constantly evaporating from the young wood through the time they are at rest under fixed roofs, or when they are subjected to alternating rests and excitements. Where plants are grown in the houses, the fogs and damp of winter, with the drenching rains and snow, suit Peaches and Nectarines in well-drained soil, the trees being invigorated and the soil enriched. If the houses have fixed roofs, ventilate to the fullest extent in all but very severe weather. Proceed with the pruning, bringing matters to a close in respect of cleansing the house and trees as soon as possible.—ST. ALBANS.

The Kitchen Garden.

MANURING GROUND.—In suitable weather, hard frosty days being the best, it is desirable to wheel manure on to the plots of ground which it is necessary to enrich. The manure should be placed on the ground in sufficient quantity so as to avoid running short when the ground is dug or trenched. The particular crops to be grown in certain positions ought to be decided upon, for, by so doing, the amount of manure required can be readily judged. For Peas, Beans, Onions, Spinach, Cauliflower, Cabbage, Lettuce, and Potatoes, liberal supplies of decomposed manure of any kind may be incorporated with the soil. For root crops, including Carrots, Parsnips, Beetroot, manure is best not added to the soil at all except it is placed in the lower layers of trenched ground. Mixing manure in the upper layers causes root crops to grow forked, spoiling their appearance and usefulness. Mixed farmyard manure is the best for the generality of soils and crops. For light and sandy soil, however, the best manure is cow manure, while for heavy and adhesive ground stable manure is more appropriate, and it may be used in a comparatively fresh condition. The strongest and richest manure may be worked into the soil for Onions, Cabbage, Cauliflowers, Peas, and Beans.

TRENCHING AND DIGGING.—Trenching is one of the best methods of improving soil, and some part of the kitchen garden ought each year to receive this special attention, for it loosens the soil to a good depth, and renders more food available. Moisture, too, in the ground is longer held than when only prepared in a shallow manner, leaving the subsoil unbroken. There are two methods, however, of trenching. One is to reverse the top and bottom layers of soil, the other is to move both, but keep the layers in their original positions. The details in managing this are not difficult to carry out. First of all, divide a plot of ground into two equal parts. At the end of one division take out a trench 2ft deep, placing the material at the same end of the other division. The bottom of the trench must be broken up and left. Next mark out another trench of the same width, and remove one foot or spit from this, adding the material to the heap at the end of the other division. Place a liberal dressing of manure on the loosened bottom of the first trench, and move the second spit of the second trench on the manure in the first. Loosen the bottom of second trench, manure and mark out the third trench. The top spit from this should fill up the first

trench. Spread on a layer of manure before adding the top spit. The same procedure should follow until the end of division is reached, when work back on the other part, where at the end the soil moved to commence with, is available to fill in at the finish.

FORCING RHUBARB.—Clumps of Rhubarb roots that have been lifted and exposed to the weather for the last week or two will be in excellent condition for forcing. Bring them into any convenient place, where, during the present month, they can have a heat of 60deg to 65deg. Such a temperature will necessarily be somewhat drying for the roots, hence it will be desirable to surround them with soil, which being kept moist, also the crowns, the essential conditions inducing root action will be present and the crowns will push. Semi-darkness produces the best coloured sticks, and the best flavoured.

MUSHROOMS.—Good horse droppings of a moderately fresh character, mixed with but a small proportion of straw or short material, should form the staple of the manure for Mushroom beds. During the process of collecting a sufficient quantity the manure should be spread out thinly in a dry structure, and when enough is obtained throw the lot into a heap to ferment. After this has commenced and the heap become hot, turn the whole of it. After two or three turnings the fierce heat has been so far spent that the material may be made into a bed, which may be a foot thick and placed together firmly. When at a temperature of about 85deg, and not likely to rise higher, the spawn may be inserted just under the surface of manure, which may be pressed closely round the pieces, having them about the size of small eggs and nicely permeated with the mycelium of the spawn. Soil the bed at once, using a mixture of good rich loam an inch thick. It may be moderately moist and firmed with the back of the spade smoothly. Cover the whole with a good layer of dry hay, which keeps the surface uniformly moist, and assists in retaining an even temperature. At the present season a structure where a heat of 50deg can be regularly maintained, will largely assist in ensuring the early productiveness of the beds. When the surface of the beds becomes dry, sprinkle with tepid water through the covering of hay.—LYMINGTON, HANTS.



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

RAISING PLANE TREES FROM SEED (H. R.).—Yes, Plane seeds will germinate in the open air in this country. The seeds are contained in the round balls to which you allude. These balls require to be broken, and should be sown in March; merely pressing them into the surface of the ground suffices, but they must be kept moist and shaded. *Platanus occidentalis* is distinguished from *P. orientalis* by its less deeply lobed, more coriaceous pubescent leaves, and in the fertile catkins being solitary in the long peduncles. The Maple-leaved *P. orientalis* *acerifolia* is the commonest in cultivation, and frequently bears the name of *P. occidentalis*, from which it may be readily distinguished when in fruit by the peduncles bearing more than one ball, and frequently many. It is the form known as the London Plane, and we consider yours is that form, though it may be the species, which has much larger leaves, and the tree of more spreading habit.

GARDENERS' HOLIDAYS.—"Saydie" asks: "Is an under gardener entitled to any holiday during the year? If he is, for how long, and are his wages paid during it?" The only answer is that unless agreed upon at the time of entering situation, an under gardener has no claim to holidays other than national ones, and these are not always given. There may be moral claims that a young gardener might expect his employer to recognise, such as giving a holiday (even though not agreed on at engagement) in return for certain overtime work, or night and Sunday duty that young gardeners are nearly everywhere called upon to render; yet a gardener has not the power to demand a holiday against the will of an employer, even though he may have done any amount of overwork. It is always best to have precise agreements in black and white. But surely, if "Saydie" asks for a holiday, and has deserved one, no one will be mean enough without good reasons that can be stated, to refuse him should he ask. During "holidays" wages are continued, otherwise idle time may be called "holiday."

PLAN FOR CROQUET GROUND (Querist).—We advise you to obtain the "New Croquet Pocket Guide," price 1s., which will afford you both a diagram and fuller information than we can possibly give you now. Any bookseller may get it, or write to "Lawn Tennis and Croquet," Laurence Pountney Hill, Cannon Street, London, E.C.

SEEDS OF ARAUCARIA IMBRICATA (H. R.).—If our memory serves us correctly, we believe Monkey Puzzle trees have been reared from seed taken from cones matured at Dropmore and Linton Park, also in other places in this country. The subject, however, is one upon which we should be pleased to have data from our correspondents, such experiences being not only interesting but useful.

QUERY.—A correspondent writes:—"There is a material called 'Ramie' (or some such name), which is utilised as a fibre. Could you kindly give me the name of the plant from which it is obtained, where grown, &c.? There is also a material called Kapoc, or Kapuc, used as a substitute for feathers in stuffing cushions, &c. From what plant is this derived, and what part of the plant is utilised for the purpose? Where does it grow or come from?" Can any of our readers assist?

LARGE TREE-MOVING MACHINE (W. Grit).—Our correspondent wishes to know where he can obtain a machine for transplanting large trees. He says:—"I see an illustration of one used by Mr. Barron in 'Dictionary of Gardening.' We have here four Horse Chestnut trees which my employer would like transplanted about 200 yards from where they now stand. They are from 3½ft to 5ft in circumference, about 4ft from the ground. If you could give me any information with regard to the above you would greatly oblige." Good, serviceable machines are made by Messrs. Barron and Son of Borrowash, Derby, to whom we advise our querist to write.

ASPHALTING WALKS (J. M.).—We presume you intend to use the gravel of the path, and no other article but the boiling hot coal tar. In that case, the gravel should be quite dry, and taken from the surface of the walk 2in or 3in thick, placing in convenient heaps in the centre of the walk, making a hole in the middle of each heap. Into the concavity pour boiling hot (make sure that it boils) coal tar and mix to the consistency of a stiff mortar, then spread on the ground 2in or 3in thick. The ground should be dry, and have the proper incline. Cover with coarse sand and, when cold, roll well. Thus you will see the work can only be well done when the weather is dry, so that the work cannot now be done properly unless the gravel is dried. It may be, however, that you wish to use other material, say two parts thoroughly dried coarse sand or fine gravel, and one part cinders, thoroughly dried. In that case mix together, place in a heap, and, making a hole in the centre, pour in boiling hot coal tar. Mix to the consistency of stiff mortar, then spread on the ground, which should be dry, 2in or 3in thick, and cover with coarse sand, fine gravel, or spar, and when cold roll well. If more convenient, two parts lime rubbish and one part coal ashes may be used, or even coal ashes alone. Dryness is the important point, and boiling hot coal tar imperative.

TAKING CUTTINGS OF CHRYSANTHEMUMS INFESTED WITH RUST (W. W., Berks.).—It is not safe to take cuttings from the plants which have the disease, for in the case of plants grown in houses the uredo form of the fungus, *Puccinia hieraci* (*P. tanacetii* of some observers), will continue through the winter on living leaves. Some growers, however, take cuttings from rusted plants, keeping a strict watch for the fungus, and carefully remove and burn all affected leaves. By this means the fungus is stamped out so far as the cuttings are concerned. Where, however, the disease has existed, and teleutospores been produced and dispersed, a recurrence of the disease is practically certain, even when all the tops of the diseased plants are burned, though that is an important matter in order to destroy any present teleutospores, and thus reduce recurrence of the fungus in a great measure, if not altogether. Indeed, to combat rust successfully prompt repressive measures should be taken, spraying at intervals, dating from the growth of new leaves, with potassium sulphide solution—1oz sulphide to three gallons of water—and on the under side of the leaves, which not only destroys the rest-spores, but also those of various other fungus pests that attack Chrysanthemums. The advertised fungicides are also efficacious against the rust.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. L.).—1, *Oncidium crispum*. (B. Lane).—1, The fruiting branch of that fine wall plant, *Crataegus pyracantha* Lelandi; 2, *Pinus excelsus*; 3, Christ's Thorn, *Paliurus aculeatus*. (D. N.).—*Arbutus Unedo*. (Andrew Potter).—1, *Osmanthus ilicifolius*; 3, *Saxifraga hypnoides*.

NAMES OF FRUIT.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (M. T.).—Apple Lady's Finger of Hereford. (—).—The Pears were too far decomposed for us to be able to identify them.

Covent Garden Market.—December 4th.

Average Wholesale Prices.—Plants in Pots.

	s.	d.	s.	d.		s.	d.	s.	d.
Aralias, doz. ...	5	0	12	0	Ferns, var, doz. ...	4	0	18	0
Araucaria, doz. ...	12	0	30	0	Ferns, small, 100... ..	10	0	16	0
Aspidistra, doz. ...	18	0	36	0	Ficus elastica, doz. ...	9	0	12	0
Chrysanthemums, doz.	6	0	30	0	Foliage plants, var, each	1	0	5	0
Crotons, doz. ...	18	0	30	0	Lycopodiums, doz. ...	3	0	0	0
Cyclamen, doz. ...	10	0	12	0	Marguerite Daisy, doz.	6	0	8	0
Dracæna, var., doz. ...	12	0	30	0	Myrtles, doz. ...	6	0	9	0
Dracæna, viridis, doz.	9	0	18	0	Palms, in var., doz. ...	15	0	30	0
Erica gracilis, doz. ...	10	0	12	0	specimens ...	21	0	63	0
caffra, doz. ...	15	0	18	0	Primulas ...	3	0	4	0
hyemalis ...	9	0	15	0	Shrubs, in pots ...	4	0	6	0
" alba... ..	12	0	18	0	Solanums ...	8	0	10	0

Average Wholesale Prices.—Cut Flowers

	s.	d.	s.	d.		s.	d.	s.	d.
Arums, doz. ...	5	0	6	0	Lilium l. rubrum ...	1	6	2	0
Asparagus, Fern, bnch.	1	0	2	0	Lilium longiflorum ...	4	0	5	0
Bouvardia, white, doz. bunches...	5	0	6	0	Lily of the Valley, 12 bnchs ...	12	0	18	0
Bouvardia, coloured, doz. bunches...	5	0	6	0	Maidenhair Fern, doz. bnchs. ...	4	0	6	0
Camellias, white... ..	3	0	0	0	Marguerites, white, doz. bnchs. ...	2	0	4	0
Carnations, 12 blooms	1	3	1	9	yellow, doz. bnchs.	0	6	1	0
Cattleyas, doz. ...	8	0	12	0	Odontoglossums ...	5	0	6	0
Chrysanthemums, specimen blooms, doz. ...	1	0	4	0	Primula, double white, doz. bunches...	5	0	6	0
white, doz. bnchs.	4	0	8	0	Roses, Niphetos, white, doz. ...	1	0	2	0
coloured, doz. bnchs	3	0	8	0	pink, doz. ...	2	0	4	0
Cypripediums, doz. ...	3	0	4	0	yellow, doz. (Perles)	1	6	2	0
Eucharis, doz. ...	4	0	5	0	red, doz. ...	0	0	0	0
Gardenias, doz. ...	2	6	3	0	Smilax, bnch ...	1	0	2	0
Geranium, scarlet, doz. bnchs. ...	4	0	5	0	Stephanotis, doz. ...	0	0	0	0
Hyacinth, Roman, doz. bunches...	8	0	9	0	Tuberose, gross ...	3	0	4	0
Lilium lancifolium alb.	2	0	2	6	Violets, single, doz ...	1	6	2	6
					double, doz. ...	3	0	4	0

Average Wholesale Prices.—Vegetables.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes, green, doz.	2	0	3	0	Leeks, bunch ...	0	1½	0	2
Jerusalem, sieve	1	6	0	0	Lettuce, Cabbage, doz	1	0	1	3
Batavia, doz. ...	2	0	0	0	Mushrooms, forced, lb.	10	1	0	0
Beans, French, per lb.	0	8	0	9	Mustard & Cress, pnnt.	0	2	0	0
Beet, red, doz. ...	0	6	0	0	Parsley, doz. bnchs ...	2	0	3	0
Brussels Sprouts, ½ sieve	2	0	2	3	Potatoes, English, cwt.	3	0	4	0
Cabbages, tally ...	1	6	3	0	Radishes, doz. ...	0	9	1	6
Carrots, doz. bnch. ...	2	0	2	6	Shallots, lb. ...	0	2	0	3
Cauliflower, tally ...	4	0	6	0	Spinach, bush. ...	2	0	3	0
Corn Salad, strike ...	1	0	1	3	Tomatoes, English, lb.	0	4	0	5
Cucumbers, doz. ...	4	0	5	0	Canary consigt.	4	0	5	0
Endive, doz. ...	1	0	1	3	Turnips, doz. bnch. ...	2	0	3	0
Herbs, bunch ...	0	2	0	0	Watercress, doz. ...	0	6	0	8
Horseradish, bunch ...	1	0	0	0					

Average Wholesale Prices.—Fruit.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples, cooking, bush.	2	0	6	0	Lemons, Naples, case	24	0	30	0
dessert ...	3	0	6	0	Oranges, per c/s ...	4	0	16	0
Bananas ...	8	0	12	0	Pears, English, ½ sieve	6	0	8	0
Figs, green, doz. ...	0	0	0	0	Pears, French, crate ...	4	0	9	0
Grapes, Alicante, lb. ...	0	9	1	0	Pines, St. Michael's, each ...	2	6	4	6
Colman ...	0	8	1	6	Plums, ½ sieve ...	0	0	0	0
Hamburgh ...	0	0	0	0	Walnuts, ½ sieve ...	2	0	3	0
Museat ...	1	6	2	6					



The Pasturage of Parks.

Legally speaking, a park is an enclosure stocked with deer; but hundreds of enclosures around mansions are termed parks, although there are no deer in them. It is the grazing of these so-called parks which we propose to discuss. In the majority of cases the park is grazed, or, rather, farmed, by the owner in connection with a home farm, or, as part of one in others, it is let as part of a farm on the estate, and in a few used as common grazing ground by the

tenants, each providing a certain proportion of the stock. The latter arrangement has considerable drawbacks, as it is often a cause of friction and unpleasantness between the tenants, and as long as animals are liable to contract diseases, will it be a ready means of spreading infection from farm to farm.

Where the park forms part of the Home Farm, welcome help may be given to small cowkeepers on the estate by allowing them for a reasonable sum per head to run their cows in the park during the summer months. As such people do not often change their animals, an easy check may be kept by the steward on their bill of health, and there will be very slight risk to the owner's cattle. In stocking parks an eye generally has to be kept on the ornamental side of the question, and animals are often seen in such enclosures which are very picturesque, but very unlikely to be rent payers. When the owner makes no account of his farm balance sheet, the steward's work is easy; but when, as generally happens nowadays, he is expected to pay interest on capital invested, and provide from the farm a rent similar to that paid by neighbouring farmers, the dead weight of a large park of moderate grass is often enough to make him despair. We have been well acquainted with such a case, and on the farm being let no tenant could be found to take the whole park, but about two-fifths had to be fenced off for meadow, leaving about 100 acres, which the tenant had to graze. This was fair high land grass, and the occupier made it pay by judiciously mixing young cattle, shearling sheep, and ewes and lambs. The latter pay well if the land is not sheeped too much, but if it were heavily and continuously stocked with ewes, the lambs will soon cease to thrive and grow.

One of the best uses to be made of park grass is the pasturing of ewes during the period of gestation from November to March. If large quantities of Turnips are grown on the farm, and a good supply is available for the ewes, the latter will be kept in the healthiest of condition by running them on grass for two or three days in every week. There is a little difficulty as regards shepherding in such large enclosures, for it is very undesirable to make much use of dogs at this period amongst ewes; but the shepherd will manage if he takes time. We should advise that ewes be kept out of the park during summer; they and their offspring will do much better on annual pastures. But shearling gimmers intended for breeding will do well, and even if the grass be poor, will be quite fresh enough for meeting the rain in autumn. If the soil be good, wethers might be fed for the butcher, but assistance in the form of cake would be difficult to give them without interference from other stock grazing alongside.

On a west country estate noted for a fine herd of Short-horns, the park, though consisting of grass above the average, was, through its large size and bleakness, difficult to graze by the usual methods. A manner of partially stocking it was tried by the steward and found very successful. Highland heifers were bought during the summer, and run in the park with a Shorthorn bull; they calved the following spring and summer, having been out all winter, receiving no extra food except a little hay in severe weather. They were allowed to rear their own calves, still wintering out, and continuing to graze the following summer, the calves still sucking, and were eventually sold in pairs (cow and calf), as they became marketable some of them requiring a little finish in the boxes. The calves at sixteen and eighteen months old were grand young cattle, and both they and their dams were readily bought by butchers at good prices. These Scots, being very hardy, did quite well without winter shelter, and thus saved all the heavy expense of winter keep, bedding, and attention. An Aberdeen Angus cross with Scotch heifers we have also seen recommended as being even hardier than the Shorthorn cross, but we cannot vouch for it personally.

There is no doubt, however, that its combination of black and gold would be a charming addition to the landscape of an English park. Another way to utilise park grass, and one that would pay a good rent, would be to purchase good drapes early in autumn, young cows of excellent milking properties, but which are not in calf. If these were mated with a good bull, they might be kept out all winter except in the severest of weather; a little hay or other dry food would be required, and also a wooden shelter, but nothing approaching the expense of yard treatment. As the grass began to grow in spring they would improve with it, and be in excellent saleable condition when near calving, say from midsummer to Michaelmas.

Nothing pays for buying in the way of live stock better than supposed barren milk cows in the face of Christmas. Buying in a market, there is a risk of getting screws. But if a large number be bought, the purchaser can generally afford to have one wrong one. A considerable proportion of these drapes turn out to be in calf, and sometimes come to profit in remarkably quick time.

The great question with cattle of this class is how to minimise the cost of winter keep. Well, wooden erections are built over foldyards to economise straw, why should not a similar one be put up in a park for cattle to fly to at night or in rough weather? If a good dry foundation were laid, very little bedding would be required, and peat moss litter would seem to be the most economical material for the purpose. The animals would not be driven in, but allowed to use the shelter at will. In this way a large number of cow beasts might be wintered in a park at very little cost, and if they only held their own, and were not in calf, the difference between autumn and spring prices would leave a margin for profit. Many parks are full of Bracken, which might be utilised as bedding instead of peat moss litter, but, as a rule, the land which produces bracken is of little use for wintering cattle.

Horses do well on park grass through summer and winter, but during the latter season they might interfere with the comfort of other stock. In summer, when no shelter is needed, a moderate quantity of horses may be grazed; but if the land be suitable for cattle, the horses must be strictly limited in number.

Work on the Home Farm.

Five sudden changes of weather in a fortnight are rather too many even for those who have been brought up to endure the fickleness of the English climate. We should highly appreciate some settled weather now, not being particular as to its character as long as it is stable. If we are to have frost, there is plenty of carting work, but there is a little more ploughing to be done before Christmas, and we should like to see it finished. The last frost touched 16 on two nights, this being the second occasion in November that ploughing has been stopped. The first frost was hardly out of the ground before we had the second. We should like to have some Swedes up and stored if the weather will keep mild. To-day has been beautiful, with warm sun, but the evening sky looks like frost.

After writing last week, we saw some Mangold being led into heaps which had been trimmed and laid in rows through the previous frost. We hardly think that the storing of such roots can turn out satisfactory. It is very unwise to trim a large break of Mangold after November has arrived, unless there be a sufficient force to cart all up before night. An old plan with us was to engage men to pull and trim, sending all the horses to plough, or similar work, until noon. After a short bait all the horses, carts, and spare men carted the roots together until darkness set in, and seldom were many left out. If such a plan were followed the spoiling of valuable roots could hardly occur.

Complaints are made of the damage done by pheasants this season to newly sown Wheat adjoining the covers. No doubt pheasants are very numerous this year, but it is the farmer's own fault if he allows them to get his seed Corn. Farmers generally tent against rooks, but pheasants are more easily kept off, for they only frequent certain fields, and a boy will hardly need a gun to keep them in the covers, where a good allowance of food is generally provided for them. The other day we saw some strips of red handkerchief hung up on thatch pegs to keep pheasants off some Wheat, without the desired effect. The tenant might as well have put up printed notices.

Pork is dearer than ever, and beef is very firm, which is promising for the Christmas markets. Fat, i.e., really fat beasts, are not plentiful, and we hear of a large wholesale butcher inquiring for fat cows full of suet, and offering 6³/₄d. per lb. for them.

Webb & Sons' Root Competition.

The awards in the above competition for the valuable prizes offered by Webb and Sons, The King's Seedsmen, Wordsley, Stourbridge, for root crops grown from their seed, and with the aid of their special manure, have just been decided. The judges were Mr. J. Brown, Easthampstead Park Farm, Wokingham; Mr. J. H. Kemp, Walton, Wellington, Salop; Mr. J. M. Belcher, Lynn, Newport, Salop, and the following is a copy of their awards.

District 1.—Five acres of Webbs' Swede, open to the counties of Salop, Stafford, Montgomery, Warwick, and Leicester. First prize, £15 15s.: Mr. J. S. Billington, Balterley Hall, Crewe, 40

tons, 2cwt 3qr 12lb per acre; second, £10 10s.: his Grace the Duke of Sutherland, Lilleshall, Newport, Salop, 32 tons per acre; third, £5 5s.: Mr. George J. England, Wykey Farm, Ruyton XI. Towns, Salop, 30 tons 8cwt 2qr 8lb per acre. Three acres of Webbs' Mangold, prize, £5 5s.: Mr. S. Timmis, Charnes Old Hall, Eccleshall, Staffs., 66 tons 10cwt.

District 2.—Five acres of Webbs' Swede, open to the counties of Hereford, Monmouth, Brecon, Glamorgan, Carmarthen, and Pembroke. First prize, £15 15s.: Mr. J. S. Birrell, Henrhiw, Usk, Mon., 30 tons 5cwt 2qr 24lb per acre; second, £5 5s.: Mr. Richard Thomas, Rowston, Pembroke, 27 tons 18cwt 2qr 8lb per acre. Three acres of Webbs' Mangold, prize £5 5s.: E. C. Curre, Esq., Itton Court, Chepstow, 79 tons 4cwt 1qr 4lb.

District 3.—Five acres of Webbs' Swede, open to the counties of Oxon Berks, Bucks, Wilts, Hants, Surrey, Worcester, and Gloucester. First prize, £15 15s.: Mr. W. L. Anson, Iverley, Stourbridge, 21 tons 2cwt 3qr 12lb per acre; second, £5 5s.: Mr. W. H. Rymer, Stroath Farm, Chepstow, 20 tons 15cwt 2qr 4lb per acre. Three acres of Webbs' Mangold, open to the counties of Oxon, Berks, Bucks, Wilts, Hants, Surrey, and Worcester. Prize, £5 5s.: Mr. H. Fernihough, Yew Tree Farm, Wythal, Alvechurch, 47 tons 12cwt 3qr 12lb per acre.

District 4.—Three acres of Webbs' Mangold, open to county of Gloucester. Prize, £5 5s.: Mr. W. H. Rymer, Stroath Farm, Chepstow, 57 tons 4cwt 1qr 4lb per acre.

District 5.—Five acres of Webbs' Swede, open to the county of York. First prize, £10 10s.: Mr. D. Cooper, Bainesse, Catterick, 34 tons 15cwt 2qrs 24lb per acre; second, £5 5s.: Mr. George Beckett, Deighton, Eserick, 28 tons 11cwt 1qr 20lb per acre. Three acres of Webbs' Mangold, prize, £5 5s.: Sir J. Lothian Bell, Bart., East Rounton, Northallerton, 59 tons 4cwt 1qr 4lb per acre.

District 6.—Five acres of Webbs' Swede, open to the counties of Norfolk, Suffolk, and Cambridge. Prize, £10 10s.: S. Nightingale, Esq., Scratby Hall, Great Yarmouth, 20 tons 8cwt 2qr 8lb. Five acres of Webbs' Mangold, prize, £5 5s.: Mr. George Tansley, 8, Norfolk Street East, Wisbech, 57 tons 10cwt per acre.

District 7.—Five acres of Webbs' Swede, open to the counties of Bedford, Cornwall, Cumberland, Cheshire, Derby, Devon, Dorset, Durham, Essex, Herts, Huntingdon, Kent, Lancaster, Lincoln, Middlesex, Northumberland, Notts, Northampton, Rutland, Somerset, Sussex, Westmoreland, Cardigan, Carnarvon, Denbigh, Flint, Merioneth, and Radnor. First prize, £15 15s.: Mr. T. E. Griffith, Gallt-y-Beren, Pwllheli, 37 tons 2cwt 3qr 12lb per acre; second, £5 5s.: Mr. L. P. Hill, Skinburness, Silloth, 32 tons 17cwt 2qr 1lb per acre.

District 8.—Five acres of Webbs' Swede, open to the counties of Roxburgh, Haddington, Berwick, Edinburgh, and Linlithgow. Prize, £10 10s.: Mr. William Pringle, Temple Farm, Gorebridge, Edinburgh, 29 tons 2cwt 3qr 12lb per acre.

District 9.—Five acres of Webbs' Swede, open to the county of Perth. First prize, £10 10s.: Mr. John Mailer, Easter Ross, Gargunnoch, Stirling, 35 tons 14cwt 1qr 4lb per acre; second, £5 5s.: Messrs. J. and D. Morton, North Muirton, Perth, 34 tons 12cwt 3qr 12lb per acre.

District 10.—Five acres of Webbs' Swede, open to the counties of Forfar, Fife, and Kinross. Prize, £10 10s.: Messrs. J. and W. Meiklem, Begg Farm, Kirkcaldy, 35 tons per acre.

District 11.—Five acres of Webbs' Swede, open to the counties of Aberdeen, Banff, Kincardine, Inverness, and Elgin. Prize, £10 10s.: Mr. William Ritchie, Teawig, Beaully, 34 tons 5cwt 2qr 24lb per acre.

District 12.—Five acres of Webbs' Swede, open to the counties of Dumfries, Kirkcudbright, and Wigtown. Prize, £10 10s.: Mr. Robert McNeil, Cairnpat, Stranraer, 35 tons 11cwt 1qr 20lb per acre.

District 13.—Five acres of Webbs' Swede, open to the counties of Stirling, Dumbarton, and Clackmannan. Prize, £5 5s.: Mr. Jas. King, Airthrey Kerse, Bridge of Allan, 37 tons per acre.

District 14.—Five acres of Webbs' Swede, open to the county of Ayr. Prize, £10 10s.: Mr. Wm. Maxwell, Sparnel Bank, Galston, 42 tons 5cwt per acre.

District 15.—Five acres of Swedes, open to the county of Peebles. Prize, £5 5s.: Mr. Simon Linton, Posso, Peebles, 28 tons 15cwt per acre.

District 16.—Five acres of Yellow Turnips, open to the county of Lanark. Prize, £5 5s.: Mr. D. B. Pate, Tofts, Douglas, N.B., 33 tons 17cwt 0qr 16lb.

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Journal of Horticulture.

THURSDAY, DECEMBER 12, 1901.

Old-time Gardening.



WE are apt to look for the initial impulse and stimulus to gardening in the days of Elizabeth, and perhaps a little earlier; and there is indeed little difficulty in tracing the constant ebb and flow of horticulture back to that period, for gardening, like the arts of peace in general, thrives best where freedom reigns. But it would be altogether wrong to assume that beyond that age a dead calm prevails. Unfortunately the somewhat dull and dreary childhood of gardening literature, now arrived at giant proportions, was spent in days centuries later than English gardening itself, and, therefore, it is from such varied sources as poets, travellers, chroniclers, painters, and the scribes of public accounts that we derive the greater part of our information on the subject in its earlier stages. From them we have the assurance that gardens hundreds of years before Elizabeth were not uncommon. Not only kings delighted in the pleasures of gardening, not only had each community of monks its garden and its grange, but rich citizens, like those of London, possessed extensive and beautiful gardens. The nobleman also had his garden within the moat surrounding his castle walls, and outside an orchard for his fruit trees. The very yeoman attached a "yard" to his dwelling, whence the physic herbs, and a few vegetables required by his household were derived.

Peas, Beans, and Leeks formed a large item of the food of the lower classes, and "worts" were in request to boil with oatmeal, to produce the universal pottage. Moreover, flowers must have been cultivated to a comparatively large extent. Men and women of all classes appear to have used them profusely for personal adornment.

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

Marriages and funerals alone called for great quantities, but beyond all these we have to look to the religious festivals held in the summer season for the most lavish employment of flowers. Priests were adorned with chaplets of Roses, shrines were dressed with them and other flowers, and the very streets through which processions perambulated were strewn with living floral carpets. Nor must it be taken for granted that the flowers used were gifts from private persons who possessed gardens. Old churchwardens' accounts give annual disbursements for flowers, the chief of which we may well believe was the Rose, a flower which was also in great request in medicine, and, in the form of rosewater, in cookery. Physicians also, though they cultivated for their own use many simples, cannot be supposed to have been able to produce a sufficient quantity to meet their demands. Therefore we may safely conclude that the market gardener, the old "hortulanus," had a standing from a very early date.

It is equally clear that the commoner fruits—Apples and Pears, Chestnuts and Quinces, and perhaps Cherries—for did not poor "Lackpenny" have bunches of them offered for sale in London streets—were also cultivated for public consumption. It is known that fruit was imported, and most of the earliest recorded names of Pears are French; such are the Calcol, St. Renel or Reglé, de Martin, Jannetar, and others; but of the same date we find the Sorrel Pear and Gold Knops, the latter still in cultivation, in last century. Then we have the Costard Apple appearing as early as Edward III., which, whether of French or home origin, certainly bears an English designation.

It is recorded of the year 1257 that the season was of so inclement a nature that, among other products, "Apples were scarce, Pears still scarcer; Cherries, Plums, Figs, and all kinds of fruit included in shells, almost quite destroyed." Later chronicles of course assume a much later date for the introduction of some of these, but, as in the case of flowers and vegetables, we must not accept their statements too literally. Hume, for instance ("History of England"), states that no salad or roots were produced in England till about 1547. Hollingshed, on the other hand, states that salads were used in the time of Edward IV. And the word "salad," it must be noted, had a wider meaning in early times than we give to it. Not only were the usual vegetables eaten raw called a salad, but so was a vegetable or flower pickled, or any vegetable, such as Spinach, cooked. Nor were they particular in distinguishing what was a vegetable and what a flower. The Violet was eaten as well as delighted in for its scent, and the Strawberry yielded its leaves for pottage, as well as its fruit for dessert. But of cultivated plants the greatest number seem to have been used in medicine. The names appearing in ancient medical recipes is most extensive, and though some of them are wild plants, there is distinct evidence to show that they were also cultivated.

I will conclude these notes with the names of a selection of these plants, and in the next article will treat of the fourteenth century garden as portrayed by Chaucer:—Southernwood, Wormwood, and Mugwort, representatives of the genus *Artemisia*. Of the Dock family, Sorrel, *Rumex sanguinea*, *R. alpinum*, and, allied to these, *Oxalis acetosella*, in use till a late period, and cultivated in gardens. Of Euphorbias, the Catapuce, *E. Lathyris*, and *E. isula*. Wild Celery, Dill, Aniseed, Chervil, and Parsley as representatives of the Umbelliferæ. Garden Cress, Water Cress, Brooklime, Radishes, Mustard, and Rape of the Cress family. The Rose by *Rosa gallica*, *R. alba*, *R. canina*, and *R. rubiginosa*, the latter generally associated with Honey-suckle; Columbine, Periwinkle, Primrose, Cowslip, Marigold, Rosemary, Chicory, Fennel, St. John's Wort, Wood-ruff, Hollyhock, Lavender, White Lily, Meadowsweet, Yarrow, *Gentiana pneumonanthe*, and *G. lutea*. Again, Orpine, White Poppy, Thyme, Pæony, Rue, *Crocus sativus*, *Salvia sclarea*, and *Genista tinctoria* are some others, most of which would have been unrecorded save for old receipts.—B.

Gardeners and Estate Agents.

Each week for many years I have turned with pleasure and expectation to the series of delightfully interesting articles on "The Home Farm" which have appeared in our Journal. On page 477 the writer of those notes has devoted a portion of the space at command to the consideration of the above subject under an "amended" heading. As the article is unsigned I will refer to the writer as my "critic," but I am bound to add that the criticisms are so fair, that the subject is treated of in so impartial a spirit, that the "agent" is not made to appear in a more—or rather not much more—favourable light than the gardener. The writer is evidently acquainted with the difficulties of each class of men, and prefers to judge them individually as *men* rather than as agents or gardeners.

The wielder of so facile a pen evidently possesses abundance of that tact which my critic considers is an essential quality in "the making of a successful agent." To that I should like to add that if in the ranks of estate agents to-day there was a greater proportion of such men, who were also fair-minded, less given to meddling, the friction between them and gardeners—aye, and tenants, too—would be infinitely less than it is. I am fully conscious of the many-sidedness of this matter, which is not one that should be stirred without due consideration; but I have definite information that the friction between the two classes has greatly increased during the last ten years, and has been largely brought about by the grasping attempts of agents to get in the "thin end of the wedge" in regard to the control of gardens over which they can claim no legitimate control.

On page 416 I gave instances of wrong-doing in this respect, but my critic seems to have got them entangled with cases in which the circumstances are totally different. When, through reduced circumstances, a landowner engages an agent to supervise the household servants and the gardens, as well as manage the estate, no fault can be found with him for attending to his business, as the gardener understands his position, and the landowner has a perfect right to have his estate managed in his own way. Under such conditions, however, one generally has to look in vain for high order of merit in any department; it is simply a matter of "shuffling along, eye service only all round, and general degeneracy."

On the other hand, gardeners who have perfect control of their charges take such a keen interest in them that there seems no limit to the amount of energy and skill which they put into the conduct of their work, and even with limited expenditure such men frequently accomplish wonders for their employers; yet these are just the men that agents frequently attempt to interfere with, in some cases, I fear, principally because they suit their employers too well. They have to maintain the gardens on a given sum per year, which the agent has to find, and also to supply horses and carts for haulage (which are charged to the gardens). If the expenditure exceeds the amount allowed, the gardener is only responsible to the employer, and for their own sake most men take special care that the expenses are kept within due bounds. Under circumstances of the above description my opponent seems to think "that it is a gardener's own fault if he allows a third person to interfere without immediate remonstrance." So it is to a certain extent, and many prominent gardeners to-day have found it necessary to remonstrate pretty strongly before they have been left in peace, and in some cases the result has been that the gardener has become the agent; in others the friction has gone on for years, and still continues. I have known landowners, having two valued servants, to put up with a great deal of annoyance in consequence of the appeals made to them alternately by their agent and gardener, and I have in my mind many excellent examples of "tact" on the part of the employer.

It is not, however, in all instances that an employer will be troubled many times with such matters; he may have given the gardener full charge, and tells him plainly that the agent is not to interfere with him, but if disputes occur he is led to retain the agent and help the gardener into another situation, which is often a good thing for the latter. The next gardener engaged is distinctly placed under the control of the agent, and this is the point which many agents all over the country are fighting for to-day. Hence my reason for sounding a warning note to gardeners generally,

as every garden which comes under such control adds one more to the list of those in which "decadence" is a notable feature. I, too, say, the bishop to his preaching, the broom-maker to his brooms, the agent to his estate business, and above all the gardener to the management of the garden.

Lack of space forbids me to offer but the briefest comment on the excellent remarks of "S. R. A." on page 438; he has shown in detail many of the "little points" in which judgment and tact on either side will help to smooth matters over, the only points on which I counsel "fight" are those which arise when interference takes place without the right to do so.

"Scottish Reader," page 492, argues well with the level-headedness and caution of his race. He advances many sensible remarks about duty to each other, and the need of charitableness to all. No one will find fault with him for that; but it is easy to see that he is attempting to pour oil on troubled waters. We may, I think, read much "between the lines" of his communication. The gist of it in other words seems to be: "Yes, yes, there is a good deal in what 'Onward' says; but really is it wise—or safe—to say much about it?"—ONWARD.

Prunings.

The giants of "Mumdom" would do well to consider Mr. R. Dean's seasonable leader on page 457, and they might pause over the particular phrase, "Exhibition blooms must increase in size, and are increasing in size, and we can only imagine the dimensions to which they may have attained ten years hence." "Ten years hence?" Imagine blooms, say, 2ft over and 1ft deep, with the possibilities of the Chrysanthemum still unexhausted. How fearful to contemplate! Absurd? That is so; for, after all, imagination is a vain thing, yet the craze for size continues, and where shall one seek finality when that is the objective? Year by year the brightest, the best, the most refined, are sacrificed to size, yet "exhibition blooms must increase." *Must*, and will, undoubtedly, unless the National Chrysanthemum Society introduces some protective clause in the articles of their faith. Alas! that we can only imagine its doing so, and kindred societies following suit! What a distinct gain would accrue if the powers that be would, in framing their schedules, make one prominent class, say, for forty-eight blooms not to exceed 6in across, distinctness, bright colours, and refinement being regarded as the desideratum. That, of course, is too Utopian to expect, but Heaven defend us from the big blooms of ten years hence.

"Forcing Bulbs," page 458. "Early forced Tulips, however, often come too short in the stem." Exactly so; hence one agrees to differ with the writer's continuation, "the scarlet and rose varieties of the Duc Van Thol Tulips are the best for providing flowers at Christmas." In some phases of decoration they are certainly useful, and cheapness may commend them to growers; but when one finds employers condemning their Duc Van Thols and running to the neighbouring nurseryman for Pottebakkers in variety, La Reine, and Yellow Prince, with other long-stemmed kinds, which he is able to have in thousands by Christmas, whilst the Ducs "go a-begging," then—well, it goes without saying that they are not the best for Christmas.

Hymenael notes are not too common in the *Journal of Horticulture*, therefore, to those concerned, good wishes galore. It was a happy thought of the Royal Horticultural Society of Ireland's Council to take counsel together and present F. W. Moore, Esq., with a token of goodwill "on the occasion of his approaching marriage," all of which is duly recorded on page 460. "Do I look like a tied up man?" said the amiable curator of the Irish Kew when asked at a certain show if congratulations were premature. No. The fates forbid! even now when the tying up has become a matter of fact, and all who know him heartily join the pruner in saying Moore power.

Blinds for glass houses are an evil, if a necessary one; all shading is, indeed, and when they take the form of the

Venetian blind principle are often an unmitigated nuisance. In most cases, however, this shading is too costly to commend itself to gardeners. On the whole, plant houses are not seldom more heavily shaded than the exigencies of cases demand. If plants can be inured to bear all the sunlight our all too short summers afford, with the slight intervention of a little "muffing" to break the direct rays, then few would be bothered with the trouble and expense of blinds. We have long since given up all sorts, and any sorts, and conditions of blinds for plant houses. Muffing only is now resorted to, and, with results no fault is to be found, whilst endless trouble is avoided. Hitherto a wash made of white lead and turps was used, but this season a trial was given of Duresco, a washable water paint, mixed with water only; it won't mix with anything else, in fact. The colour employed was sage green, and rather "nice" in appearance than otherwise, owing to the thinness of the wash laid on. It stood the season through, in spite of heavy rains, but with a light rubbing is easily removed at any time from glass; on wood or brickwork it sticketh closer than a brother. There are, of course, other good washes, some of which wash off when wanted, others when not wanted, and some that won't wash off at all. Duresco is the best thing used yet.

"Styles of Gardening," by "F. C.," page 479, covers a wide field of thought, and embraces much variety of opinion. In some respects comparisons between the old and the new are invidious. Under the high pressure of a restless age in which we live, nothing is more restful than to enter some old-world garden with all its "constant nameless grace." Such are rare, but still to be met with far from the madding crowd. Like old china, they should be kept, not copied. "F. C.," under analysis, seems to show marked preference for the bedding "blaze" which of recent years extremists have tried to relegate to the limbo of lost arts. The gay Geranium, or sprightly Begonia, however, are not likely to be thus thrust into oblivion, and the formal style harmonises with classic formality of architecture that no other style can ever do; whilst the variety, freedom, and interest pertaining to mixed borders of hardy plants, or what not, is a style which holds its own, apart from formality. There is generally room for all styles in places of even moderate dimensions. Each is fitted to its own place and purpose, and without sharply dividing lines the blending of all is, perhaps, most pleasing, provided a happy forethought prevents confused ideas to the eye, or incongruous arrangement which,

"Like sick men's dreams,
Varies all shapes and mixes all extremes."

On page 491 "E. D." supplies useful hints on grouping Chrysanthemums. He possibly thought, but did not speak, of those cases where other plants are excluded. Apart from the desirability of Chrysanthemum plants being furnished with their own foliage to the bottom, something to cover the nakedness of the pots in a group is often the one thing wanting where small foliage plants are not permitted. Some exhibitors tastefully clothe the naked pots with small branches of bush Ivy mantling the base, and on one occasion a happy effect was seen with Oak twigs still bearing their russet-brown foliage.

Apropos of this year's Chrysanthemum shows, aquatic sports as an addenda is something fresh. To societies caring to introduce this novelty, the thing is fairly simple. Just flood your hall from 1ft to 2ft in depth, as the floodgates of heaven permit or prevail, then charter a coal dray for the convenience and conveyance of passengers, the said dray to be backed up across the footpath for loading off the quays—no, steps. Brother gardeners, when boarding, for want of anything to cling to, will cling to each other, rendered necessary by the peculiarity of the craft, an Irish coal dray, which is all deck, and no bulwarks. All aboard! Right away, across the pavement and into the gutter, all hidden in a swirling flood, where she bumps and rends her rigging—girths; up on her beam ends; passengers shot in a squirming heap, from which they wriggle back into the hall, to be wrung out and receive the congratulations of their friends. Such happened not a hundred miles from Belfast, and was graphically narrated by an eye-witness to—SAYNOB.



Sophro-Cattleya x Nydia.

On November 12, Messrs. J. Charlesworth and Co., of Heaton, Bradford, staged this bi-generic hybrid at the Royal Horticultural Society's meeting in the Drill Hall. A figure of it, by Mr. George Shaylor, appears on the opposite page; and the colour is a uniform dark scarlet, with some small purple spots on the sepals and petals. The parents of S.-C. x Nydia are *Sophranitis grandiflora* with *C. x calumata*, and the effect of both parents has resulted in progeny of marked intermediary characters. The Orchid Committee awarded a First-class Certificate.

The Week's Cultural Notes.

I have frequently seen the advice given, in all good faith, to partially dry *Cypripedium insigne* after flowering as the plants are at rest. How wrong this idea is may be seen just now by anyone who will take the trouble to look over their plants. They will see that the flowering growths are not the youngest; that there are others in various stages, some partially made up, others nearly finished, others just starting. This is not a restful state by any means, or a restful season for the plant in question, however much it is for the pseudo-bulbous Orchids.

Not only this, but the plants are hardly past the strain of flowering—many, in fact, just coming into flower. By no means dry the plants then, but rather encourage them by all possible means. If there is a time when *C. insigne* may be said to rest, it is in the late summer, before the flower scapes show, but even then drying is not required. Place them in a frame, or even in the open air in protected positions, but never dry them. What is true of *C. insigne* is true of many others, and here the watchfulness on the part of those in charge that I have so often noted as being required may again be recommended.

That lovely little *Cattleya C. citrina* is beginning to move, and must now be encouraged. Until the growth is getting well away avoid a very moist state of the compost, and see that the growths hang in the natural way—i.e., upside down, as they appear—this being a precaution of Nature against moisture settling in and decaying the flower as it issues from the centre of the growth. A little later, when the growths commence to root on their own account, a thin surfacing of new compost may be given, but that is not yet. Just let the plants move steadily along in their own way, and do not attempt to force them by means of heat or moisture.

The night temperature where *Phalænopsis* are grown must now be kept as regular as possible. A house that is kept, say, at 70deg or 75deg one night and allowed to drop to 55deg or 60deg the next is very unsuitable to these sensitive leaved subjects, and has the effect of starting them into unseasonable growth and then checking them. Keep them regular and keep them at rest if possible, for the conditions are not by any means likely to lead to satisfactory growth at this season. A resting specimen takes no harm, where a plant growing sluggishly may be, and often is, ruined by slight checks.—H. R. R.

Literature.

"The Tropical Agriculturist."

The November number of this useful magazine of information regarding products suited for cultivation in the tropics contains some very interesting reading. A useful article on Orange and Lemon Curing and Packing appears, and should form an efficient guide to those it is intended for. Numerous notes on rubber growing, on Quinine, Pruning, Tea, Coffee, Cocoa, Chinchona, and references to everyday topics more strictly confined to hot countries are liberally furnished. The publishing office of "The Tropical Agriculturist" is in Colombo, Ceylon.

The Best Hardy Perennials for Cut Flowers.*

First to last this book is attractive, from the inclusion of forty-eight full page (10½in deep, 7½in broad) coloured plates of choice hardy perennial flowers. One of the beautiful Siberian Irises adorns the front cover, and the subjects on the pages within show a wise and experienced selection. A perusal brings to notice well-known genera, but such as are the quintessence of the flowers of British hardy flower borders. The majority of the plates portray a number of varieties of the genera; plate ii., for instance, has five varieties of *Anemone japonica*. The

* "The Best Hardy Perennials for Cut Flowers," by Mr. F. W. MEYER. Liverpool: Blake & Mackenzie. 1901. Price 15s. net, post free.

Michaelmas Daisies are appropriately recognised, and amongst other flowers illustrated in true form and colours we may name *Centaureas*, *Chrysanthemums*, *Delphiniums*, *Doronicums*, *Aquilegias*, *Echinops*, *Erigerons*, *Eryngiums*, *Helenium*, "Lenten Roses," *Arabis albidiflora*, and Dame's Violet; *Heucheras*, *Inulas*, *Poppies*, *Lupines*, *Phloxes*, *Rudbeckias*, *Scabiosas*, *Trollius* in variety, *Campanulas*, *Wahlenbergias*, *Primulas*, *Polygonums*, *Irises*, and *Pyrethrums*.

The author says:—"The work is not intended as a complete handbook on hardy perennials, but rather as a selection among the many hundreds of different varieties such as may claim special merit on account of (1) the hardiness even in the Northern counties; (2) their beauty of form and colour; and (3) their suitability for supplying cut flowers, both naturally and when forced. The illustrations are the work of Mr. Walter Müller, Gera, Saxony, and appeared, though in different order, in the German work, 'Die schönsten Stauden.' The present edition, however, contains little of the original matter in the form of translation, and much additional matter on plants that are not illustrated. Mr. Meyer has had over twenty-five years' experience with the hardy plants in the nurseries of Messrs. Veitch and Son, at Exeter. Details of culture and general treatment appear opposite the illustrations.

A novel feature of the book is the provision of ruled pages for memoranda notes. In turning to look for such admirable plants as *Salvia virgata*, *Hedysarum coronarium*, *Polygonum lanigerum* (with its silvery-grey foliage for decoration), *Lathyrus latifolius albus*, and *L. rotundifolius*, *Thalictrum adiantifolium*, and a number of other specially graceful, useful, and beautiful plants, we are surprised to find them omitted, and there is no reason, surely, why they should have been. Though the best of the various genera are undoubtedly given, yet it would still have added value to the book had a slightly increased selection been made. Only one of the *Statice*s is chosen, that being *S. lanata*. Then again have *Incarvillea Delavayi* and *Gerbera Jamesoni* proved themselves hardy everywhere in the North? We should like to think so, for few open-air flowers are so lovely. Plates xii. and xiv. are duplicated, though the inscription names the first of these as illustrating *Chrysanthemum maximum*, and the other as *C. uliginosum*.

The book embraces 105 pages, and the price of 15s. nett is very cheap indeed, for the plates are really works of high excellence, and thoroughly well printed.

An Old Book.

The full title is "Kalendarium Hortense; or, The Gardeners' Almanac, &c.," by John Evelyn, Esq., F.R.S., 1676. The book in question is a sixth edition of Evelyn's earlier production, and, according to the author, "contains many useful additions." We had it sent to us long ago by Mr. G. Foster, Glendaragh Gardens, Teigumouth, and after an undisturbed repose in the recesses of a drawer in one of the rooms here, it was rummaged out lately by one of the young men probably possessed of a bent for archaeological research. The monthly cultural operations for the year are detailed with great simplicity, and prove a considerable amount of experience. The directions for the fruit and kitchen garden in December are as follows: "Prune and nail wall fruit (which you may defer a month or two longer), and standard trees. You may now plant Vines, &c. Set all sorts of kernels and stones [of fruits]. Sow for early Peas and Beans, but take heed of the frosts; therefore it is surest to defer it until after Christmas, unless the winter promise very moderate. All this month you may continue to trench the ground and dung it, to be ready for 'Bordures' (?) or the planting of fruit trees. Either late in the month, or January, prune and cut off all your Vine shoots to the very root, save one or two of the stoutest, to be left with three or four eyes of young wood. This for the vineyard. Now feed your weak stocks. Turn and refresh your autumnal fruit, and open the windows where it lies, in a clear and serene day."

It will be seen that gardening operations were well understood by John Evelyn. The lists of Apples and of Pears which he gives as keeping well in December are of interest. These include Apples, Rousseting, Leathercoat, Winter Reed, Chestnut Apple, Great-belly, the Go-no-further, or Cats-head, and some of the former month. The Pears are: The Squib, Spindle, Doyonere, Virgin, Gascoigne-Bergamot, Scarlet Pear, Stopple, White, Red and French Wardens (to bake or roast), and the Deadman's Pear; all of which are, of course, long obsolete.

The same little book, with its stout brown leather binding, contains a long philosophical discourse of "Earth" (or soil, really) relating to the culture and improvement of it for vegetation. This lecture was delivered before the Royal Society, April 29, 1675. The discourse was, for the times, very profound, and contains a great deal that was then original if not all exact. His observations on the values and properties of the various natural manures are correct, and even now are very interesting. A dip into old books is a commendable means for obtaining some amusement, and perhaps mental refreshment. The works of the cultured John Evelyn (1620-1706) are all interesting. He was the first in this country to treat gardening scientifically.

Seaside Planting.

The difficulties to be encountered in the formation of shrubberies, plantations, and woods on seaside ground are, as might be expected, variable. In some localities all that is required is simply to prepare the ground, select trees and shrubs suited to the soil and situation, and properly plant them in due season. These districts imply natural shelter, or, at least, non-exposure to wide stretches of open seaboard whence the wind sweeps with hurricane force. Where wind-swept seaside ground has to be dealt with a shelter screen is imperative. It may be of a temporary kind, such as faggots of brushwood securely kept in place by posts and rails, the post firmly set in the ground and about 6ft out of the soil, 9ft to 12ft apart, the rails 1ft and 5ft from the ground respectively, being securely nailed to the posts on the seaward side. Against this fence, Thorn, Gorse, or Spruce, or other trimmings, 6ft long preferably, should be placed, and firmly tied to the rails by means of binding wire or strong tarred rope. If faggots are employed they should be placed on and against the paling-rails on the seaward side, and be secured with binding wire to them.

This dead fence is better than a solid wall, and even superior to throwing up a mound of earth along the coast, as is sometimes done where the shore is almost destitute of sand and where some vegetation exists. The screen-fence shifts the wind, beyond for a little distance breaking its force in passing through it, and gathering the salty spray, relieves the space of the saline particles otherwise driven and deposited on the trees and shrubs that may be planted, and giving the appearance of having been reached by untimely frost. It also lessens wind-shaking to a great extent, which it is necessary to guard against, preferably by planting trees and shrubs whilst small, though sturdy for their age, or by securely staking and tying.

Where the embankment mode of shelter is adopted its height should not be less than 4ft 6in, better 6ft, and the top should be at least as wide as the height. The slope seaward and landward should have a base equal to the perpendicular, or at an angle of 45deg. On the top of this seaside-earthwork plant a double line of the "hard as nails" Sea Buckthorn (*Hippophaë rhamnoides*), or Tamarisk (*Tamarix gallica*), or common Elder (*Sambucus nigra*), or Goat Willow (*Salix Caprea*), with the Rose Willow (*S. rubra helix*), and the White Willow (*S. alba*). The Willows make a capital fence on wind-swept shore when well cut in; so also does the Myrobalan Plum (*Prunus cerasifera*) and the Wild Pear (*Pyrus communis*).

With the screen-fence or the earthwork shelter planting may be proceeded with during March if showery, or during April, as the start is then all in favour of the trees and shrubs that are commonly transferred from inland to the seacoast. The planting must commence immediately behind the screen, making pits or holes of not less than 2ft in diameter and 15in to 18in in depth. If thrown out some time previous to planting all the better. If firm soil, the bottom and sides of each hole should be loosened with a pick, and where of an inferior quality it is very desirable to add a spadeful or two of good mould to each pit, always placing good soil about the roots.

The plants should be dwarf, not exceeding 18in or 2ft in height, sturdy in growth for their size, for only the proportionately strong have a chance, the thin, drawn, and weakly plants taking a long time to recover, even if they do, the seaside not being favourable to their recuperation. Recently transplanted plants have abundance of fibrous sorts, and these are only suitable for seaside, indeed, planting anywhere, especially in exposed situations, and they will have been grown thinly, at least lanky, ill-grown, coddled trees and shrubs are hardly worth planting.

Having arranged so that the plants will be as short a time out of the ground as possible, and their coming to hand without

the roots being more dried than can possibly be prevented, plant them with the strongest and most roots seaward, and not deeper than they have been whilst in the nursery. Place next the screen-fence or the raised earthwork such subjects as the well-ried Sycamore (*Acer Pseudo-Platanus*), Winged Elm (*Ulmus alata*), and White Willow (*Salix alba*). While of Conifers the Austrian Pine (*Pinus austriaca*) and Cluster Pine (*P. Pinaster*) are trustworthy against hard-blowing and long-continued sea-coast storms. As a small growing tree the common Elder (*Sambucus nigra*) yields to no other for endurance of saline-laden storms, and may, with Sea Buckthorn (*Hippophaë rhamnoides*), be associated with the deciduous trees before-named for withstanding the fierce brunt of the sea-storm, whilst the Mountain Pine (*Pinus Mughus* or *Pumilio* or *montana*), as a low-growing Conifer, may be introduced with the Conifers recently noted, as it is of undoubted hardihood and withstands fierce and cutting winds. Natural pruning by saline-laden spray occurs when the Buckthorn is subjected to such spray, as on the Haddington coast.

Inside the belt or plantation, which should be several lines in breadth, many other trees and shrubs may be planted, but those thriving near the sea should be selected and in measure of their endurance. In many districts, however, the trees and shrubs are not required, or even need be, in belts or plantations behind a fence-screen or an earthwork barrier, they being required in more open order, and for the embellishment of pleasure grounds, and for general purposes of ornament and shelter, therefore the various subjects may be usefully referred to separately, and in order of merit.

Deciduous Trees.

Sycamore (*Acer Pseudo-Platanus*).—As the most valuable tree for its shelter, this is entitled to first rank, for it sends its sturdy, twiggy branches in the "teeth" of the blast, even at high-water mark, and in winter affords considerable shelter. It will grow in almost any soil. It bears cutting-in well, and for forming a tall screen has no equal, the plants being planted about a yard apart and cut over when well established about a foot from the ground.

Huntingdon, or White Willow (*Salix alba*).—For windy shores this is an excellent tree of quick growth, and succeeds well in almost any kind of soil. The Bedford or Green Willow (*S. viridis* syn. *Russelliana*) also succeeds well, and, as before mentioned, makes, as does the White Willow, a capital fence or screen when well cut in.

Abele, or White Poplar (*Populus alba*). As a breakwind this silvery aspected tree is first-rate on the east coast, and when well pruned in it forms a dense bushy specimen, thriving well in almost any soil.

Norway Maple (*Acer platanoides*).—This grows rapidly, and soon forms excellent shelter on very exposed and wind-swept shores, being very hardy and valuable for withstanding the first brunt of the sea-breeze. It thrives best in good soil, not liking heavy and cold land, though not very particular as to soil.

Wahoo, or Winged Elm (*Ulmus alata*).—The Winged Elm was first brought to notice by Mr. A. D. Webster, as one of the most valuable for planting in cold, wind-tortured, and maritime districts, as it does not bend and shrink from the blast, but stands boldly out and defies both wind and storm.

Aspen Poplar (*Populus tremula*).—A fast growing and excellent shore tree, hardy, and withstanding a great amount of rough usage. The Necklace, or Canadian Poplar, equals, if not rivals, the Aspen, it (*P. monilifera* syn. *canadensis*), standing the sea breeze well, being perfectly hardy, and affords a great amount of shelter. The Black Poplar (*P. nigra*) also does well, and the Lombardy Poplar (*P. n. pyramidalis*) is first-rate, and will endure almost any amount of cutting in, beheading when growing too tall.

Scotch or Wych Elm (*Ulmus montana*).—This tree affords good shelter, sending up suckers from the rootstock, and is very hardy and proof against damage from storm, but it is not in anywise worthy of front rank.

Common Alder (*Alnus glutinosa*) and Hoary Alder (*A. incana*) are charming for planting in wet ground in the vicinity of the sea, and stand the full force of the blast from it in a wonderful



SOPHRO-CATTELEYA NYDIA.

manner. In some districts it is advisable to plant the trees rather closely, and when they have attained to a height of 10ft to 15ft, cut every alternate one over at the ground level. This results in a number of shoots from each in the following spring, and after these have grown for two or three years the other trees may also be cut over at the ground. In that way a first-class windbreak may be secured and maintained.

English Maple (*Acer campestre*).—This does not like wet, but well-drained land, and on exposed seaside grounds holds its own as a densely branched tree, affording considerable shelter in both summer and winter, and as a fringe-fence or hedge is excellent for maritime woods.

Turkey Oak (*Quercus cerris*).—In poor or well drained soils, and not in the first brunt of the sea storm, this is a valuable tree for shelter, as its leafage breaks the wind, and the sturdy twigs and ample limbs do good work in winter as wind sifting.

Common Beech (*Fagus sylvatica*).—The calcareous and sandy formations suit this tree, but it rather yields to than stands out boldly to the sea breeze, nevertheless is a great wind breaker from its many twigs, and does fairly well by the sea, but is better as a second than a front rank tree.

Ash (*Fraxinus excelsior*).—This very graceful tree proves well adapted for planting in poor rocky soils exposed to the ocean's blast, yet has not the shelter of the others preceding. It is, however, worth planting for its gracefulness, and for thriving in poor soils.

Birch (*Betula alba*).—The "queen of the woods" braves the seastorms, and has a very graceful appearance, and is serviceable in poor, rocky soils.

Small-growing Deciduous Trees.

Common Elder (*Sambucus nigra*).—Where will this not grow? What succeeds better in poor sandy soil? Not any stands bolder to the angry blast or heeds less the pelting of saline particles. Whether as a single specimen, in which it spreads about widely, or as a breakwind fence or hedge, it is amongst the best for seaside planting.

Service Tree (*Pyrus domestica*), Beam Tree (*P. Aria*), and Siberian Crab (*P. prunifolia*) are excellent for planting in positions exposed to saline winds and storms.

Mountain Ash (*Pyrus Aucuparia*).—This, the Rowan tree, grows luxuriantly on exposed seaside land, and succeeds even down to high-water mark, notwithstanding that the soil be of the poorest description. It is not only pretty in foliage, flower, and fruit, but very useful for planting as shelter along the roughest parts of the coast.

Wild Pear (*Pyrus communis*).—Mention has been already made of this tree as a hedge plant, it forming a branching specimen, lovely in blossom and not unattractive in fruit, and is a very good plant for fences near the sea.

Cherry or Myrobalan Plum (*Prunus cerasifera*).—This tree not only grows well and bears its Cherry-like fruit as a specimen, but it also makes a good hedgerow plant; though not bearing as such, yet a fence is of consequence in seaside resorts, and all the better if not tempting to juveniles.

Common Laburnum or Golden Chain (*Laburnum vulgare*) and Scotch Laburnum (*L. alpinum*) do exceedingly well, and it goes without saying are very beautiful in the early summer.

Hawthorn (*Cratægus* species and varieties).—The white, pink, and red, both single and double blossomed forms are splendid, and do well near by the sea, even the "haws" render the densely branched spreading heads attractive in the winter season, and afford food for the thrush family of birds and some others equally pinched in severe weather.

Wild Apple or Crab (*Pyrus Malus*).—This vies with the Siberian in its efforts of doing well on the sea coast, the so-called ornamental Crabs being even more effective in flower and in fruit, though some consider the tint of the British Apple the "pink of perfection." It prefers well drained soil and rocky spots to damp places.—G. ABBEY.

(To be continued.)

Irish Notes.

December has come, though garbed in an unorthodox fashion. The frost and all its entourage is absent; the weather at present is pleasant, and there is an absence of all the unwelcome climatic factors. The genial conditions helped our roseries, and until lately I could easily pull some very fine buds, especially of *La France*, so that it is hard to get them to rest. Ambling through the herbaceous borders, dowered with memories of floral enchantment, the leafless stalks vivify one's thoughts. Yet, flowering in one corner we have *Schizostylis coccinea*, that winter flowering gem from *Kaffraria* commonly called "the Winter Gladioli." Christmas or Lenten Roses are just bursting into bloom. The large-flowered type, *Helleborus argutifolius*, though commonly termed *angustifolius*, is being cultivated, though much later when in flower. To have *Hellebores* in variety at this period is a

decided acquisition, the blooms being a great boon for cut flowers, and last a fairly long time.

A recent visit to Trinity College found the *Ipomæas* in health, especially the greenhouse twiners, notably *Horsfalliæ* and *Leari*, which are about the best. The blooms are borne in abundance, and should prove welcome in our conservatories, though they have not yet received the recognition from our cultivators on this side of the Channel. The uncommon *Laportea moroides* was fruiting. It is the well-known Queensland tree whose vinous purple fruit has merited the appellation of poisonous, and is a member of the *Urticaceæ*.

The Royal Horticultural Society of Ireland are holding their annual meeting next week; it should mark a turning point in the affairs of the society. The drifting into insolvency is to be regretted, but the executive are not wholly blameless, and the year's working should show a something better, and induce the committee to inaugurate a scheme for the furtherance of horticulture. The advent of Messrs. Dickson, the eminent rosarians, in their branch depôt is a welcome feature.—A. O'N.

Early Tomatoes.

Those who can command a temperature of 65deg, a light sunny structure, and some bottom heat, may sow seed now thinly in pots of light and sandy soil. The pots should be freely drained, and filled with a compost composed chiefly of light loam, leaf soil, and sand, equal parts of each. Porosity of the soil is important for the seed pots, as water supplied must drain quickly away. In addition to the drainage crocks, cover the latter with some of the rougher parts of the compost, and do not fill the pots level with the rim nor press the material too firmly at this season of the year. The soil must be thoroughly moist and warm, and if so, plunging the pot in cocoa-nut fibre over hot water pipes in the temperature previously named, water will not be needed at first.

Scatter the seeds an inch apart round the edge of the pot, and just cover with sandy soil, which press smoothly. It will be of great assistance in retaining the soil uniformly moist if the surface is covered with a layer of moss until the seed germinates, but not a moment longer. If allowed to remain, the seedlings will be weakened, which is almost fatal to success at this season. Another plan is to cover the pot with glass, keeping it dark until the seed pushes its first growth. A position for the pot near the glass in a heated house is absolutely necessary from the very first after the seed has germinated. The growth must be encouraged to advance sturdily if slowly. The plants will always be the better for it afterwards. Give as little water as possible, and utilise every ray of sunshine.

When the seedlings have made a nice lot of fibrous roots they will be ready to pot singly in 2½in pots, sinking the stems down to the seed leaves. Drain these pots with one crock and a little turfy material, still using the compost sandy and light, but pressing it a little closer together round the roots and buried stems. A position on a warm shelf and in abundant light must be afforded. Water carefully. If they have been intelligently managed on these lines up to this stage, the after management will be comparatively easy. The plants may require one more shift into a size larger pot, growing on near the glass until they are filled with roots, when it must be decided whether they are to be fruited in pots or in a border.

For the earliest crops 7in or 8in pots are perhaps the best, because the plants are then portable, and can be elevated to the light, a matter of extreme importance during the limited daylight of the early part of the year. The compost may be of a stronger character, and be pressed more firmly into the pots. Grow to a single stem, training to wires just under the roof, and rub out all side shoots as they form. The flower trusses which appear on the main stem may, when the flowers are fully open, be smartly shaken at mid-day to disperse the pollen, or pollen from the ripest or fully opened blooms can be collected on a camel's-hair brush and conveyed to the stigmas ready to receive it. Early in the season the latter method is the most necessary.

If the pots are not quite filled with soil at the time of potting, a light top-dressing or two of rich soil will be of advantage in promoting the welfare of the crop, and as the soil becomes well occupied with roots weak supplies of liquid manure are specially beneficial.—E. D. S.

NOTES

NOTICES

Weather in London.

The weather on the whole for a week past has been agreeable, though the state of the roads and paths, owing to the showers, has been less pleasant than the fastidious care for. On Tuesday morning Londoners woke to look out on snowy roofs and roads: but the fall was very slight, and scarcely had we any frost.

Weather in the North.

Showery nights, and days of high winds with drizzly rain, have marked the past week. During the night of Saturday the hills to the North were whitened, and on the following night the low grounds were covered with snow. Monday was variable, with sleety showers.—B. D., S. Perthshire.

United Horticultural Benefit and Provident Society.

The usual monthly committee meeting of this society was held on Monday evening last at the Caledonian Hotel. Mr. C. H. Curtis was in the chair. The minutes of the last meeting were read and confirmed. Two new members were elected, making a total of eighty-three for the year. Two members only are now on the sick fund, but five others have received sick pay during the month, the amount paid out being £16 1s. since the last meeting. The treasurer reported that he had invested £400 in London C.C. stock, leaving him a balance in hand of £7 2s. 10d.

Royal Horticultural Society.

The last fruit and floral meeting of the Royal Horticultural Society this year will be held on Tuesday, December 17, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. The committees will meet at noon as usual, and an election of new Fellows will take place at three o'clock. At a general meeting of the society, held on Tuesday, November 26, thirty-seven new Fellows were elected, amongst them being Sir James Blyth, Bart., Lady FitzHerbert, Captain C. N. Lyall, Edmund Deacon, M.F.H., and Eugene E. Hennesey, B.A., B.Sc., making a total of 888 elected since the beginning of the present year.

Presentation to Mr. James Watts.

On Saturday afternoon, November 30, a deputation, consisting of Messrs. A. B. Robinson, W. Symes, E. Parkes, and Albert Winfield, waited on Mr. James Watts, who for nearly twenty years has been the hon. secretary of the Blackwell Horticultural Society, to make him a present of a very handsome half-hunter keyless gold watch and a beautifully illuminated address in album form. The address ran thus: "The accompanying gold watch has been presented to Mr. James Watts by the following members and others interested in the Blackwell Horticultural Society as a mark of esteem and appreciation of the valuable services rendered by him to the society for many years as hon. secretary." The names of the subscribers followed.

Metropolitan Public Parks Association.

A meeting of the Metropolitan Public Gardens Association was held at 83, Lancaster Gate, W., on Wednesday, December 4, the Hon. Dudley Fortescue, vice-chairman, presiding. Correspondence with the London County Council and other public bodies was considered, and it was agreed to lay out the garden of St. Philip's, Avondale Square, S.E., to appeal for £50 for the formation of a school playground in Bethnal Green, to offer to lay out the churchyard of St. Paul's, Clapham, and to oppose the scheme for a second tubular railway under Hampstead Heath. The question of the excessive and unskilful lopping of trees in various parts of London was also under consideration. A letter was read from the London County Council in answer to the association's inquiry respecting the threatened building on forecourts in Albert Road, N.W., stating that an application to advance the line of frontage had been refused. In reference to a letter from the Smoke Abatement Society, it was stated that smoke and other fumes exercised a most pernicious effect on plants and trees in the metropolis, and it was agreed to express the sympathy of the association with efforts made to purify the atmosphere.

Royal Appointment.

Mr. William Bull, F.L.S., V.M.H., new plant merchant, of 536, King's Road, Chelsea, has been honoured with the appointment of florist to His Majesty the King.

Mosquitos' Nets.

The experiment has been sanctioned of supplying mosquito curtains to men of the R.G.A. doing duty at the River Forts, Rangoon, to ascertain whether any reduction in malarial fever amongst them can be thereby effected. Mr. Carmody, in the American "Journal of Tropical Medicine," has sketched a mosquito net for travellers in hot countries. It is attachable to the ordinary umbrella or sunshade, and serves the double purpose of keeping off the sun by day and the insects by night.

Aids to the Location of Well Water.

One of the recent improvements which the United States Geological Survey has introduced in its excellent series of geologic maps is an arrangement of lines by which the depth of the rock layers which are known to produce water can be determined. These lines are drawn to show the depth below the surface of both the upper and lower faces of the water-bearing rocks in the section covered by the map, and add a valuable feature to these already useful publications. The information on which the introduction of the water lines is based is being gathered (says "American Gardening") by skilful geologists, who are making a thorough study of the underground formations for the express purpose of locating waters which will be available for use by means of wells. In certain parts of the country, as upon the Plains and in the more arid West, these guides to the underground waters will be of the greatest service, not only to the farming population, but to the towns and cities which are in need of a municipal water supply.

Scottish Notes.

Mains and Strathmartine Horticultural Society (Dundee) has arranged for a series of lectures to be delivered under its auspices during the coming winter months. The first of a series was delivered very recently in the Public Hall by Mr. Henry Havelock, manager, Meric Moor Nurseries, Downfield. Mr. Tom Melville presided over a large audience. Mr. Havelock dealt with the preparation of the soil, suitable manures, the practical method in which to plant young trees in their various stages, and the best positions to plant in. He then proceeded to give an interesting history of the Apricot, Apple, Cherry, Pear, Plum, and kindred fruits, giving hints as to the kinds of trees to cultivate. Various forms of trees were exhibited. Pruning, which, the lecturer said, was the great secret of success in the cultivation of fruit, was practically demonstrated. An interesting collection of fine Apples, and also a beautifully arranged table of plants in foliage and flowering plants sent by Messrs. Thyne and Paton, 18, Union Street, Dundee, was exhibited on the platform.

Sutton's Seed Catalogue.

The first seed catalogue to reach us for the coming season is that of Messrs. Sutton and Sons, Reading. As usual, it is profusely enlivened with splendid illustrations that tell far better than yards of descriptive text exactly what this plant or that plant is like. Vegetables, flowers, and plants are portrayed. Garden Peas occupy a prominent position in the forefront, and no less than thirteen varieties are illustrated life size; other vegetables follow in rotation. The variegated Kale, we observe, is offered, and for purposes of ornament in borders, or for garnishing, surely a great deal more of the coloured Kale could be grown. Potatoes, Broccoli, Cauliflowers, Brussels Sprouts, and Cabbages are liberally and well represented: such as will make the practical cultivator linger over them with passive yearnings to emulate by products of his own skill the examples shown in Sutton's Amateur Guide. The view of a "brake" of the Selected Ailsa Craig Onion on page 57 is specially good, and such excellent exhibits of high cultural skill should have the effect of inciting less fortunate men to better results in future. Among flowers we find Primulas, Begonias, Poppies, Petunias, Cyclamens, Sweet Peas, Salpiglossis, Aquilegias, Pansies, Wall-flowers, Calceolarias, and very many annuals and other beautiful easily-grown plants. All novelties are specially typified by a bold headline. Sutton's Amateurs' Guide in Horticulture is always well worthy of its name, and that of the great firm who publish it.

Appointment.

Mr. G. Ellwood, for the past four years head gardener to C. R. de la Salle, Esq., of Enbridge, Newbury, as head gardener to W. H. Myers, Esq., M.P., Swanmore Park, Bishops Waltham, Hants. Entering on his duties January 1.

Chimonanthus fragrans at Kew.

This soft-yellow flowered shrub that dares to blossom while snows hang upon its twigs, and frost upon the fringes of its petals, has already bedecked part of a west wall between the Cactus house and the private pits in the Royal Gardens at Kew. Near by it the crimson flowers of Cydonia (Pyrus) japonica are also expanding, but elsewhere all around is bare.

A New Flower Vase.

A new style of flower vase has been patented by Mr. A. W. Young, the hardy plantsman, of Stevenage, Herts. The advantages claimed for the invention are:—“(1) Being of a taper shape, all flowers placed therein at once assume the desired position, viz., even bunches, showing each flower to advantage without crowding, and blooms facing all one way; (2) Being made in six sizes of different heights, they can be placed one behind the other, and the flowers will then appear in the form of a bank, without the aid of pots, blocks, or other cumbersome contrivances; (3) Should any vase be wanted to be heightened, it can be done by simply using one of the tubes made for that purpose; (4) Lightness in conveyance; little room required, as they can be placed one in the other, thus occupying little space when not in use; (5) Being made in zinc, they are not liable to damage and breakage in travelling as the china vases now in use; (6) In short, all flowers exhibited in these vases show to much better advantage, they being made ornamental.”

Presentation to an Old Gardener.

On his retirement from a forty years' superintendence of the gardens and estate of Glenlee, New Galloway, N.B., the inhabitants of the district presented Mr. Melville, on Wednesday evening, December 4, with a handsome marble and bronze clock, a pair of silver candlesticks, and a purse of sovereigns; and to Mrs. Melville a beautiful tea and coffee service. Provost Cowan, New Galloway, made the presentation, and expressed the hope that Mr. and Mrs. Melville would long be spared to look on and use these mementoes of their friends in the Glenkens, and enjoy the leisure they had so well earned after their long, useful, and honourable life spent in Glenlee glen. Mr. Melville feelingly replied. The clock bore the following inscription:—“Presented to Mr. Wm. Melville by his friends and well-wishers on the occasion of his leaving Glenlee after thirty-nine years' service.—November 27, 1901.” It might be added that a great deal of ornamental and forest tree-planting was done on the estate in Mr. Melville's time, and for many years his services were much in request as judge at horticultural shows in the South-West of Scotland.—CORRESPONDENT.

The “Garden Annual.”

The “Garden Annual, Almanack, and Address Book” for the coming year, has been issued from the office of “Gardening,” 37, Southampton Street, Strand, W.C. We notice that the change of names in the curatorship of the Royal Gardens at Kew has not been made, nor has Mr. Bean's appointment to the assistant curatorship, which occurred a year ago, been noticed, and, of course, nearly the whole body of the garden head staff have been variously changed. The changes that took place in the Royal Gardens at Windsor, on the accession of His Majesty the King, have been overlooked, consequently the gardeners' names there, and at Sandringham and Gosford, are wrongly given. Mr. J. W. McHattie's name is omitted from the superintendenceship of the Edinburgh City Gardens, and the new secretary of the Scottish Horticultural Association (that has about 1,000 members) is unrecognised, and Mr. Laird's name and address remain. The foregoing are all so important that in a horticultural directory book they ought by no means to have been overlooked. Of course, there are a large number of such defects, but having practical experience of the difficulty there is in getting gardeners to send in alterations of address, it is unfair to refer to them. Even the most perfect directory speedily becomes unreliable owing to the constant changes that are occurring. Lists of new plants certificated during the year (but without any descriptive text) are included, also calendar and seasonable work for each month, postal and other useful information.

Kildare County Council.

Mr. W. Tyndall, The Gardens, Gilttown, Newbridge, Ireland, has been appointed instructor in horticulture to the Kildare County Council.

Mr. Shrivell at Broughty Ferry.

Under the auspices of the Technical Instruction Committee, Mr. F. W. E. Shrivell, F.L.S., gave his lecture on “Chemical Manures in the Kitchen Garden,” on December 6, at Broughty Ferry. The subject was illustrated by blackboard sketches, and proved entertaining.

Women as Working Gardeners.

Speaking at the Women's Institute, in Victoria Street, recently, Miss Bradley, of Lady Warwick's Hostel, Reading, is reported to have said “that experience at the Reading School showed that a period of two years, with about six hours' practical work and some lectures daily, was sufficient to give the training necessary for a single-handed gardener, but that for a post of authority a longer experience was requisite. Gardening, dairy work, poultry raising, or bee-keeping would, under favourable circumstances, provide a livelihood for an industrious woman. She mentioned that pupils from Lady Warwick's Agricultural College now obtained good posts in the colonies, and that at home many of them occupied satisfactory posts at a minimum of 25s. a week.” The advantages of an open-air life are freely acknowledged, but there is a natural doubt whether the majority of women would find the life of a working gardener at 25s. a week at all suitable.

Kew Gardens and Fog.

Sir William Thisleton Dyer, the Director of the Royal Gardens at Kew, was recently interviewed by a representative of the “Daily News,” and in his remarks he touched upon the fog nuisance. “The smoke going into the air gathers moisture, condensing the clouds, and you have fog. What we have to do,” said the Director, “is to attack the factories in the East of London, for the fog comes up from east to west, and extends as far as Reading. It is of no use to go along the Thames Valley to get away from it. If we could only stop the factory chimneys! The domestic grate could also be much improved. But we cannot do everything at once, and we ought to stop the factory chimney from sending out smoke. If London were governed as Glasgow is, it would be done. They won't have it in Glasgow, where they even fined a Lord Provost. They have a modified Socialism there, which is common sense. Sir W. Richmond thinks that about 50 per cent. of the fog would go if the factory chimneys were stopped, and he is probably right. Ten years ago I promoted a committee of the Royal Horticultural Society, and experiments were made as to the constitution of a foggy atmosphere. Be sure you give credit to the Horticultural Society for that, because they did the work. I will show you a report of it. We had some dreadful fogs in February, 1891, and the investigation was made then. The point we ascertained was, that there is a definite poison in fog. And then there is the colouring of the flowers. The proper development of colour requires light, and we do not get it.”

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. December.										
Sunday ... 1	W.	deg. 41·5	deg. 39·5	deg. 48·1	deg. 38·9	Ins. —	deg. 40·7	deg. 43·2	deg. 47·2	deg. 30·0
Monday ... 2	S.W.	46·1	43·7	52·3	40·8	—	42·0	43·8	47·2	34·0
Tuesday... 3	S.W.	45·1	42·2	47·8	41·5	—	42·4	44·2	47·1	32·2
Wed'sday 4	S.W.	36·2	35·0	40·1	32·0	—	41·2	44·5	47·1	23·6
Thursday 5	S.E.	33·8	32·0	44·9	27·0	0·02	39·6	44·0	47·1	21·8
Friday ... 6	S.W.	33·3	32·9	54·3	29·0	—	39·9	43·7	47·1	20·4
Saturday 7	S.W.	53·9	51·5	55·4	33·8	0·06	41·5	43·5	47·0	30·3
MEANS ...		41·4	39·5	49·0	34·7	Total. 0·08	41·0	43·8	47·1	27·5

Another week characterised by cold, dull, dry weather.

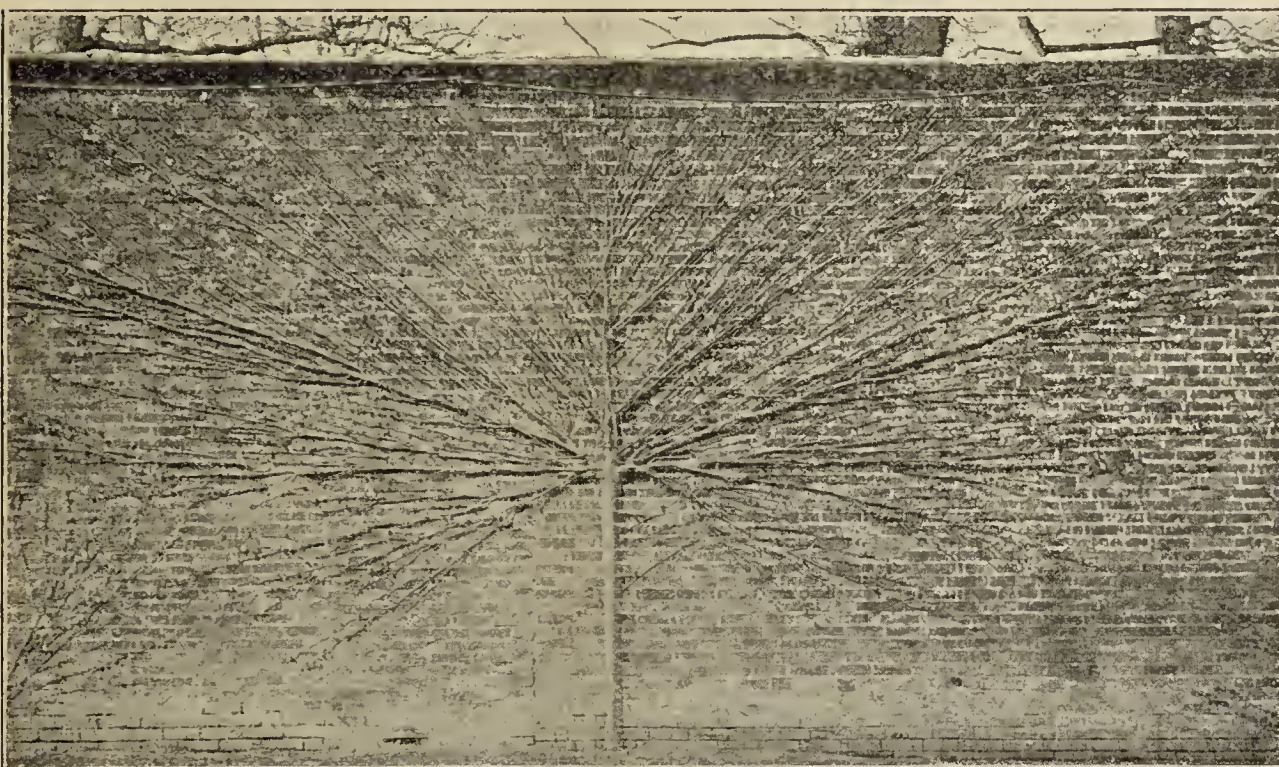
The Apricot and Its Culture.

The Apricot was introduced into Europe from Persia (hence its generic name) upwards of a century before the Christian era, but there is no record of its having been cultivated in Britain before the year 1562, while its introduction to France dates as far back as 1450. It was considered by the Romans as a species of Plum, and such it is treated of by Pliny. Dioscorides describes it as known in Italy under the name of *Precæcocia*, on account of its earliness, and from this word is derived Apricot.

From Turner's Herbal we find this fruit tree was generally cultivated in 1562, having been introduced by the gardener of Henry VIII. Gerarde, in 1597, named but two kinds, and adds, "These trees do grow in my garden, and now-a-dies in many other gentlemen's gardens throughout all England."

Classification.

Mons. F. Jamin (the celebrated French pomologist) in adverting to distinguishing one variety from another, remarks that "by simply inspecting the wood, it is difficult to



FAN-SHAPED, WALL-STANDARD APRICOT TREE AT WESTON HOUSE. (See "The Apricot.")

do so; but sometimes confusion may be avoided by noticing the distance (more or less great) between the leaves. In Peach Apricot and its sub-varieties, for example, the leaves are very near each other, and the youngwood consequently short-jointed, whilst in other kinds the wood is longer jointed, and the leaves therefore perceptibly farther apart. By means of the foliage Apricots may be divided into three great classes: First, the varieties with large leaves, the blade of which forms a right angle with the petiole, as in Apricot Royal; second, those kinds in which the blade of the leaf is rather tapering, and forms a sharp angle with the petiole (as in Montgamet, Luizet, &c.); and thirdly, the varieties in which the leaves are flaccid, wavy, and partly folded, as in Peach, Moorpark, Viard. The stone is also of some assistance in classification. It is generally of a bitter taste, but has a sweetish flavour in the following varieties, viz., Montgamet, Hollande, Blenheim, and Luizet. In Peach Apricot and its sub-varieties the stone is perforated, that is to say, it presents on one side a small orifice, through which a needle may be passed, a characteristic not found in Corunna or the Royal, and many others." Referring to the variety Luizet, Mons. Jamin remarks that it was raised by Mons. Luizet of Elully-lez-Lyon, and seems to have excelled all others, the fruit being of good quality and ripens rather early, while the trees present a vigorous and fruitful appearance.

Apricots are extensively grown in the neighbourhood of Paris, and there the Apricot trees are worked upon the stock of the St. Julien Plum. About twenty-two miles to the west of Paris, and along the banks of the Seine for a dis-

tance of about five miles, is to be found some remarkable land, and which for centuries has been utilised for the culture of Apricots. In that region "the soil is warm and calcareous, and everyone grows Apricots." In Dr. Hogg's "Fruit Manual," the author, in referring to the Moorpark variety, says he doubts very much if there is any material difference between it and the Peach variety, as the Peach Apricot reproduces itself from the stone, and many seedlings have been raised from it. Further, that the Moorpark is one of these seedlings, the fruits being so very similar, and the only characteristic to show that they are not identical is that the Moorpark will grow on the common Plum stock while the Peach variety will not.

"The Moorpark is said to have been introduced by Lord Anson from the Continent, and planted at Moorpark, near Watford, in Hertfordshire. Others ascribe it to Sir Thomas More, who, in the beginning of the eighteenth century, is also said to have planted it at Moorpark; and a third account is that Sir William Temple introduced it. It has several synonyms, but in 1788 it is first called Moorpark."

The Peach Apricot requires the Brussels, Brompton, and Damas Noir stocks. Mons. Jamin remarks that in the neighbourhood of Paris and other districts, the Apricot trees are worked on the stock of the St. Julien Plum. Philip Miller, in his quaint style, remarks that "the Bruxelles is by far the most delicious fruit of all the Apricots, and is greatly mended by growing on a standard." It is ripe about the beginning of August; it is of middling size. Breda Apricot also, he remarks, "is for the most part planted for standards"; in the open, I presume, as he says, "Do not let the branches cross each other."

A continuation of my notes will be given in a succeeding issue; meanwhile, I must refer to the illustrations of fan-shaped Apricot trees that appear on pages 535 and 537 of the present number. A standard fan-shaped tree is portrayed on the first of the pages mentioned, and represents a tree in full bloom at Weston House, Shipston-on-Stour, the beautiful seat of the Earl of Camperdown. The photograph was kindly sent to me by Mr. John Masterson, the expert head gardener, with the following letter:—"The Apricot with the long stock and the fan-trained one (on page 537), I planted in 1878. The high stocked tree is a fine specimen, measuring 15ft high and 30ft wide; length of stock, 5ft. I am greatly in favour of this style of trained tree. The lower branches being trained downwards tends to check the strong flow of sap, and this flow I have proved to be too much for the Apricot at times. I attribute my success here with this fruit chiefly to frequent root 'tapping,' which regulates the growth, and stops the production of rank, sappy wood. Another important item is the keeping of all rank manure out of the soil, and only using old building mortar and rubble as a top-dressing, and feeding with manure water when the crop of fruit is heavy. Following these rules never fails to have good crops; the same with Peaches."

When in blossom, the Apricots and Peaches at Weston are protected by curtains of frigi domo, suspended by brass rings run on a wire under the coping of the wall—a mode adopted by my late father about fifty years ago when head gardener there—the ends of the curtains being fastened to poles fixed at an angle to the top of the wall. It may be interesting further to remark that a portion of one of the old Peach and Apricot walls is flued, the chambers running, I believe, three or four times horizontally through-out, and I have a vivid recollection of the peculiar hollow sound produced when nailing the trees against the old wall in question. The garden at Weston is well sheltered, especially the south walls, by a plantation of tall old Oaks and Elms in close proximity. The comparatively light and highly cultivated soil, however, produces splendid crops of early vegetables and Strawberries.—WILLIAM GARDINER.

Victoria, on Vancouver Island.

The Jewel of the West, to we, who are of British birth, is Vancouver's Isle, included in school geographies with British Columbia. Few regions on the whole face of the earth are so tempting to the English temperament, and in letters sent home by the Press Correspondents, the advocacy of these splendid regions as a new home for the immigrants from the Motherland has been enthusiastic and extended. We give an extract of a descriptive letter sent to the "Morning Post" by Mr. E. F. Knight, in which he enumerates some of the flowers and the general grandeur of the country surrounding Victoria. He writes of it as being "singularly beautiful, the undulating promontory being covered with woods of Pine and Fir and a lovely wild jungle of Arbutus, Roses, flowering bushes of many varieties, and English Broom, which, since it was imported here, has spread all over the more open country, so that it is ablaze with golden blossom for a great portion of the year. In the spring and summer there is an extraordinary abundance of beautiful wild flowers, and in the autumn all the vegetation is aglow with tints vivid or mellow, and amid this pleasant bocage, skirting the little bays and headlands of the promontory, are scattered the delightful homes of the fortunate citizens of Victoria—the professional men, the merchants, the retired soldiers of the Empire.

"These country houses are all built of wood, most picturesque and comfortable in appearance, and of harmonious colouring—shades of red, terra-cotta, and dark oak predominating. Each house stands within extensive grounds. Landscape gardening is made easy for one here. One has but to leave a portion of one's plot of land uncleared to have a sweet wilderness of Roses and evergreen bush and fern-grown rocky dells, with here and there, perhaps, clumps of Pine or Cedar; but the carefully laid out gardens that immediately surround most of these mansions and cottages astonish one by their profusion of bright flowers. Here one sees the Geraniums, the Sunflowers, the old-fashioned Columbines, Sweetwilliams, and others with which we are so familiar, but far more luxuriant and fuller of blossom than they are at home. Never in the environs of any other city," says Mr. Knight, "have I seen such a glory of flowers as surrounded each of these lovely homes. Many a one of these cosy wooden houses had quite an old English air, and the garden that surrounded it might have belonged to some old Elizabethan mansion. The wild vegetation, too, in which these little estates were set had the luxuriance, not of the tropics—whose cloying sweetness often makes the exile sick for home—but of the tender North. It is this combination of rich wild country and old-fashioned English homes that makes the surroundings of Victoria so wholly delightful.

"They tell one, and I can quite believe it, that he who has stayed here awhile is so conquered by the charm of the country that if he leaves it he is compelled to return to it. Then how magnificent are the landscapes on which the possessors of these pleasantest of homes look out, embracing broad waters, sinuous straits, timbered islands and capes, and behind all the mighty mountain ranges of the mainland, with their summits of eternal snow, the most conspicuous peak being Mount Baker, which, though a hundred miles away, is generally clearly visible from here. When I saw this fine mountain it looked like a huge bell of delicate white suspended in mid air, for only its snowy dome gleaming in the sunlight was distinguishable, its lower slopes, where the snow was not lying, being invisible for distance, and blending with the blue of the sky. These waters form a splendid cruising ground for the yachtsman, and nearly everyone here keeps his little yacht or sailing boat, which in many cases lies at anchor at the bottom of his garden, and often in his own little sheltered inlet. Yachting can here be combined with grand sport, the best of shooting and fishing, and even with exploration; for there are vast tracts unknown to the white man which can be approached from the lonely gulfs on the mainland."

Surely, a land rich and tempting to the horticulturist, especially he with some money with which to develop the natural resources of so fine a region.

Cold Storage Dangers.

Referring to the recent explosion on one of the Royal Mail Company's boats, Messrs. Elder, Dempster and Co. state:—"The process of cooling the air on board the steamers of our line, the Imperial Direct West India Mail Service, does not entail the employment of any ammonia, nor is it in any way liable to an accident of the kind. Mr. Lawton, who has so regrettably lost his life in the accident, submitted his invention to us, and we gave it a prolonged trial, extending over four months, but came to the conclusion that it was dangerous, in addition to being defective in other respects. We would also like to point out that the makers of the machinery used on board our steamers, J. and E. Hall, Limited, have more than once pointed out the possible danger to life attendant upon the use of ammonia in refrigeration."

Japanese Dwarf Trees.*

Landscape gardening is really seen in its utmost glory when the artists are philosophical, when the spectators regard their work with serious reverence, and when art ceases to be, as it so often is, a mere idle recreation. It is said these dwarf trees are "decidedly curious," "half-crippled," "distorted," or "cruelly tortured," &c. Those who thus criticise our trees in bitter language walk into their gardens, pick the first flowers that come to hand, and arrange them anyhow in a manner which (to excuse themselves) they call "studied negligence." This is ignoble. It is evident that every one of these Liliput specimens of horticulture can hardly be called artistic. Imitation is often practised by way of flattery. Many of the eclectics are studied and copied, and not always with success.

Again it is alleged a great deal of timber could have been obtained in all these years from such a multitude of potted, shrivelled-up trees to decorate rooms and make cabins more elegant. Such an argument proves that the rigid principles, which are wrongly termed utilitarianism, are truly ridiculous, since they would abolish the cultivation of the æsthetic sentiment that forms such an important element in realising and promoting the Utopian ideals of mankind.

In Japan, a jinrikisha man will bring home a Pine tree about 6in tall, with uplifted, exposed roots, intertwined and twisted in a most irregular fashion. He buys it with part of a day's hard-earned wages. He might indeed have bought something that would yield more substantial comfort; but he preferred this—a pride to him. He looks at it, smiles at it. He is happier in the society of his favourite friend than the British working man when he hears that "The Father's Beer" Bill has been rejected by an overwhelming majority.

The lecturer threw on the screen a photograph of an Araucaria, which, with its pot, was no more than 2½ft high. The picture was taken by a camera at the Japanese Garden, exhibited at the Glasgow Exhibition last summer by Messrs. Yamanaka and Co. A Cupressus (*Chamaecyparis*) was also exhibited. It measured 3ft, and stood, as the lecturer stated, rather tall to be called a "dwarf" tree. He pointed out graceful bowers of a tree named the "Hiyoker Hiba," amid clusters of massive leaves of Chabo Hiba, another species met with very frequently in Japan. This whole arrangement was effected by grafting. The former was the stock, and the latter the scion. The two together formed a much different tree to either of the two viewed separately, and one would be inclined to think it imitated a Weeping Willow.

Having given an illustration of the front and back of the Chabo Hiba tree, showing how the branches were unsparingly bent and twisted in order to keep the tree to a limited height of, say, 2ft or so, and which reminded one of smashed and mingled coils of the spring of a broken watch, he went on to state: Trees grow in their own way, and gardeners must bring them round to their own ideas, accordingly to contrive that such a mass of foliage in compact forms shall be artistic, it is evidently necessary to adopt and add fresh shoots where required.

The general practice of side grafting is carried out about March and April, when the new buds are soft. First you must cut the scion in an oblique manner, about one-eighth of an inch, and then sharply cut again just a little of the outer bark; cut the stock also at the same angle about a quarter of an inch, and take out the free portion of bark; then place the scion in the appointed situation. Just tie it once with a soft straw, and then apply a bandage. The intended scion is to be no more than 1½in. When the whole operation is finished, take it into a dark room for some thirty-five to forty days, and then put it under a straw cover in open air for thirty days or so. After that it may be exposed without covering to the open air and sunlight. The reason for avoiding the sunlight is at first so evident. The sap should not circulate too violently when the joint is just made, until it can be distributed with equal force in the other part of the tree.

Dwarf trees should be watered from January to about June at midday, when a little water may be sprinkled on the leaves; from June to August at about two to three o'clock in the afternoon; after August at the same time as in the spring. However, the quantity of water depends upon

* Résumé of a lecture recently given by Mr. TOICHI TSUMURA before the Japan Society, London.

atmospheric dryness. It is very difficult to fix how many drops should be given to each pot.

The soil contained in the pot and the nature of the tree are to be considered. For instance, the Conifers require little water when in pots. It is better to use the smaller-sized pot for Pines than those that seem to be large enough, for they prefer dry mould. In potting them, therefore, it is desirable for the gravel to be put in the bottom of the pots to let the water run down easily. The mould laid on the top of the gravel should not be the heavy sort, nor be filled in tightly for the same reason. The quantity of water to be given depends a great deal on what sort of mould they are planted in, and whether the weather is very dry or otherwise. Generally speaking, evergreens do not require so much water as the deciduous plants. They are habitually kept in a sufficiently damp condition to let the sap flow in a gentle manner. This last consideration is very important, for the sap must not be overloaded with water, either when they are pruned, grafted, or, as is specially the case with Pines, handled so unsparingly by a process generally known as "rings"—that is, the fastening up of young shoots in a calculated twist to an older branch of the same tree.

Grafting is met with rather less frequently where the growth is quicker, and the younger twigs are generally bent in a wavy manner. When the leaves do not grow densely,

Apples and Pears at Bristol.

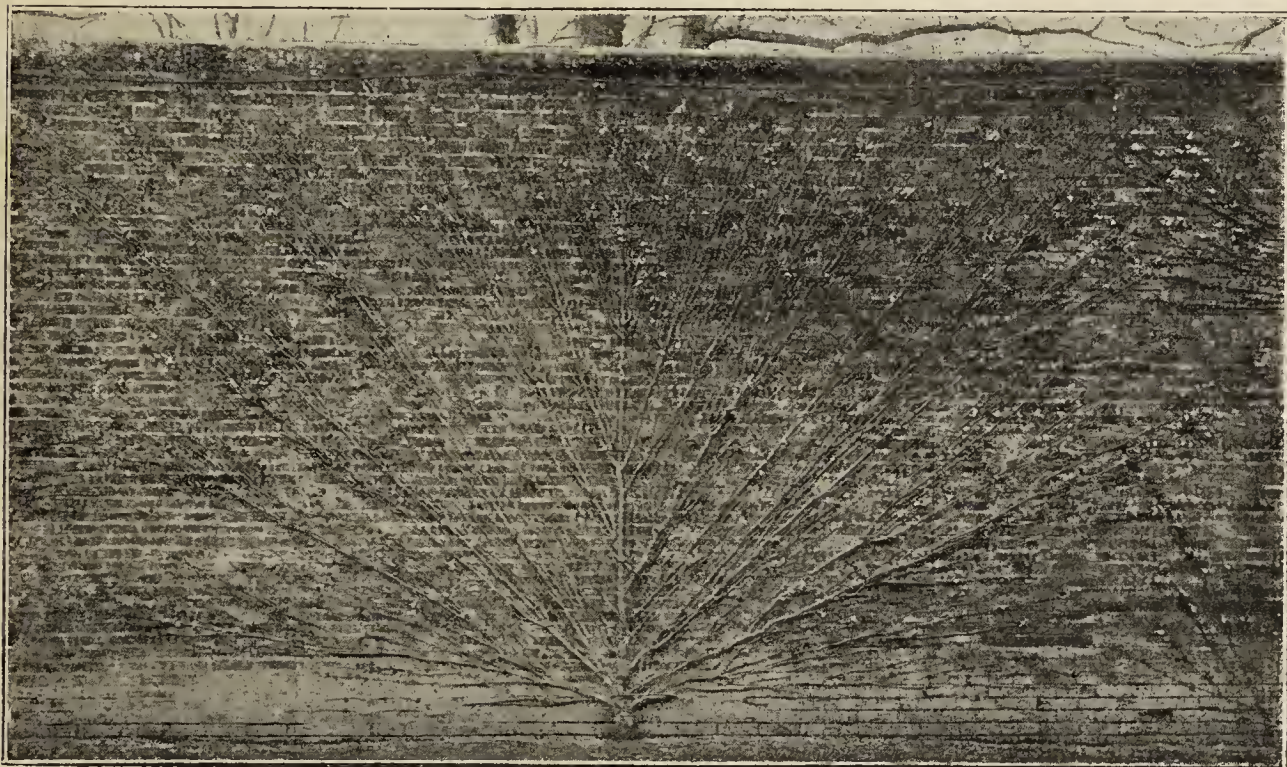
In connection with the fine show of Chrysanthemums annually held in Bristol, there is always a wonderful display of fruit, the schedule providing several classes for Apples and Pears in collections and single dishes. The season has been almost notorious for its partiality of Apples and Pears, and it must therefore have produced in the minds of many visitors a feeling of surprise, if not envy, when confronted with the wealth of such fine fruit. The great extent of competition is explained to some extent in the fact that exhibitors come from so many and widely separated districts and centres, though not attracted by the value of the fruit prizes offered. Somerset, Gloucester, Dorset, Hants, Hereford, Monmouth, and Wilts contribute to this display of fruit and flowers, and though there are specialists in both present, there are a greater number who exhibit both.

Quantity and quality of both Pears and Apples were such that it would be scarcely fair to describe one as inferior to the other, even in a fractional degree. Nor could the fact be lost sight of that there were Pears that had been wonderfully well preserved. For instance, Doyenné Boussoch, an October Pear of fine appearance, though of doubtful keeping

character, were in beautiful condition in one collection, as were also Pitmaaston Duchess, Forelle or Trout Pear, and Souvenir du Congrès. The queen of Pears, Doyenné du Comice, were plentifully shown, and in fine character too, as also were Marie Louise, Emile d'Heyst, Beurré Fouqueray, Beurré Superfin, Beurré d'Avalon, Magnate, Duchesse d'Angoulême, Glou Morceau, Beurré Alexander, Lucas, Maréchal de la Cour, Huyshe's Princess of Wales, Beurré Baltet Père, Beurré Diel, and Beurré Bachelier. For Pears there are classes for six dishes, and four dishes, dissimilar, and a single dish, which naturally provide a repetition of kinds, and especially of the more popular ones, such as Doyenné du Comice, Pitmaaston Duchess, Beurré Diel, and Beurré Clairgeau. The latter, though not of high quality, affords the brightest touches of colour among the many plates of Pears, which is made a reason for its inclusion among dessert Pears, either for exhibition or home use.

For shooting parties colour plays an important part in the treatment of the dinner table on some occasions, and it is here where this finely coloured Beurré is acceptable in accentuating the depth or wealth of colour in winter when so desired. It is very marked what varying reports one may hear from host and guest. There are those who will praise the Pear as much for its edible qualities as for its fine outer coat, which sometimes assumes a bright crimson on the surface exposed to the sun.

Herefordshire and Dorset, perhaps, contributed fruit of the finest colour in the Apple classes, the Goodrich Court fruit being particularly meritorious, both for size and quality. Similar classes are provided for these as for Pears, with the addition of those for culinary varieties. The task of the judges was certainly not an enviable one in arriving at a true and just verdict, for among the many collections and single dishes staged there were little to choose between them. Very few, if any, could be found fault with, either in collections or single dishes, and not a few had to go away disappointed. Cox's Orange, King and Ribston Pippins, comprised three out of four varieties in several exhibits of dessert. Blenheim, Cornish Gillyflower—always a favourite with the judges at Bristol—Adam's Pearmain, Baumann's Red Reinette, Monmouthshire Beauty, Margil, Court Pendu Plat, Scarlet Pearmain, Brownlee's Russet—a very pretty Apple—Fearn's Pippin, and American Mother, the latter very fine in colour, comprised the bulk of variety in the des-



FAN-SHAPED APRICOT TREE AT WESTON HOUSE. A MODEL OF FINE TRAINING. (See p. 535.)

there must necessarily be some methods used to make the appearance of the trees more compact. This zigzag line of the trunk is widely adopted in Palms. The younger shoots in every alternate concave curve are nipped away, for the simple reason that they would be hidden from the sunshine, and the development, therefore, generally unsatisfactory. But the existence of such shoots is desired sometimes for bringing them out in different plane and angle. These are called "pocket branches." The Pines have a tendency to shoot up a set of branches from certain points. These points are treated, when the bending into zigzag manner is carried out, in early summer, in such a way as to form the sharpest points in the curves. At that time all the useless branches are cut off, the "pocket branches" will be done away with.

In conclusion, Mr. Tsumura said: If we examine closely, we find that deliberate care is taken in all the bendings and twistings of the young branches. The possibility of life and health in a branch, such as will be required to work it up, or, rather, conform it to one's ideal, is the first principle of this kind of art. Only by trying it can you understand and appreciate the difficulties we have to face, for every branch has its own habitual growth, direction, and power of growth, and finally the possibilities of its future; all these factors must hence be counted upon; the result of the art is not one that can be obtained immediately, but after a very long period of expectation.—R.

sert classes, and certainly few can complain at the collective qualities of the selection.

Peasgood's Nonesuch were conspicuous in the culinary section, several fine dishes being on view. *Mère de Ménage* too, were beautiful in colour and weight, and Warner's King, though not equal to Mr. Cannell's monster, were distinctly fine in size and state. There were Cox's Pomona, Gloria Mundi, Belle Dubois, Loddington or Stone's, Newton Wonder, Alfriston, Byford Wonder, Alexander, Bramley's Seedling, Blenheim Orange, Lane's Prince Albert, Annie Elizabeth, Bismarck, Tower of Glammis, and Beauty of Hants, all of good repute for size and quality. Except in the single dish classes, four fruits comprise a dish in these cooking kinds, the number being all-sufficient for every purpose. Five fruits are required in the dessert section, and if Pears four is the number required. Those societies who demand larger numbers should take a hint from this well-appointed exhibition. The smallness of the dish raises the standard of quality instinctively higher, a fact that should have a value not only as affecting Apples and Pears, but other fruits also, at summer and winter shows.—W. S.

Pear, Doyenné du Comice.

Fruit growers unite in assenting to give the first place in order of general merit among Pears to the variety we name in the headline, and illustrate this week on page 539. The spray is so reduced that the characters of the individual fruits are not correctly defined; but, at any rate, the figure shows the fine bearing qualities of this Pear, and emphasises its worth for pot culture. A correspondent a few years ago wrote to the *Journal* stating that about eight dozen fruits had been gathered by him from one tree in a 15-inch pot; and it was from a spray sent by the writer we refer to (Mr. Geo. Hawkins, when gardener at Ewenny Priory Gardens, Bridgend, South Wales) that the illustration was prepared. The cultural work necessary to keep pot fruit trees in continued health and good form is by no means light, yet does it not repay to have even a few orchard-house trees when such returns are yielded?

Landscape Gardening.*

Landscape gardening deal with the disposition of grounds; water, rocks, buildings, trees, and other plants which go to the composition of the landscape. Such in a broad sense is the definition of the art, for it may be employed to create a beautiful and harmonious scene where only Nature in barren wilderness reigned before, or to merely improve and adapt existing natural beauties and resources to the requirements of taste and convenience; and although it is an art of which, like many others, everybody thinks he is a judge, and the younger and more confident the landscape gardener is the more he deems his judgment infallible.

Landscape gardening has been practised since the earliest dawn of civilisation. The earliest accounts we have of gardens are those recorded in the Bible, the gardens of the Israelites. It may be assumed that, in addition to all the varieties of indigenous plants and trees, exotics were also cultivated in ancient Palestine. Solomon, doubtless, cultivated trees and plants after some scientific system. Gardens of considerable extent were attached to the King's palaces, and also to the houses of the wealthy; and in these gardens were fountains, baths, grottos, rockeries, &c. Irrespective of their own inherent attractiveness, and yet in close alliance with it, the universal delight in gardens, and particularly in such gardens as are most intimately associated with human habitations, may be traced to the remembrance of the fact that the first earthly garden was planted by the Creator Himself, and by Him was expressly ordained to be the home of newly-created man—man in his condition of primeval perfection and happiness.

The Christian, also, cannot fail to associate with his idea of a garden the habit of Christ to frequent that garden called Gethsemane; and he also will remember that the tomb in which the body of the Lord was laid was a tomb in a garden. Solomon had grand Royal gardens in the neighbourhood of

Jerusalem, beautiful gardens at Urtza, near Bethlehem, a country residence and beautiful gardens at a place called Tirzah. The gardens of Uzza. Existing remains also go to show that Solomon built a mountain palace in the Lebanon, which of course the whole—or at any rate as much as he required—of the beautiful Libanus Hill country, with all the Cedars of historic fame, would go to form his great park. It needs but a small stretch of imagination to fancy King Solomon in all his glory walking arm-in-arm with his Royal guest, the Queen of Sheba—his own wives, meanwhile, we will suppose to be well out of the way—around those Royal gardens, which were so magnificently grand and some of them so far apart, that had the motor-car of these days been then in existence, methinks the Royal pair might have found it useful. Besides the above, the Egyptians, the Persians, Assyrians, and other remote nations prided themselves on their magnificent gardens. Those of Epicurus, and of Pissistratus, Cimon, and Theophrastus were the most famous in Greece. The gorgeous gardens of Lucullus, Sallust, Crassus, Pompey, Seneca, &c., show the delight which the Romans took in them. The Romans were the first who introduced the art of gardening into Western Europe. But it was not until the reign of Henry VIII. that gardening made any particular advance in England.

The Romans introduced landscape gardening into Britain, but the art was lost when the country was abandoned by them to the Saxons. As, however, it had meantime been fostered in France, it was probably introduced again by the Normans. Henry I., according to Henry of Huntingdon, had a park (*habitationem fararum*) at Woodstock, and it is conjectured that this park may have surrounded a magnificent Roman villa, the ruins of which, covering about six acres in extent—were discovered on the Blenheim estate, early in the nineteenth century. If the conjecture is well founded, Blenheim may be regarded as the most ancient site, as well as the grandest example of landscape gardening in Britain; according to some it is the grandest in Europe.

The earth's landscape in all its varied, sublime, and appreciable forms, have been bequeathed to us by the Great Creator of all things, and the first man, we are told in Holy Writ, who enjoyed such glorious elysian scenery in the Garden of Eden, was Adam. Whether that is so or otherwise, is good enough for us and for our purpose here; anyhow, in this belief we are far from being alone. Amongst many others we find so celebrated a painter as John Martin exhibiting, in 1824, his imaginary "Garden of Eden." Also an imaginary picture of the terraces, or of that which is better and more generally known as the "Hanging Gardens of Babylon." These are produced in Loudon's "*Arboretum Britannicum*."

What ever the earth was like prior to the creation of Adam, we have no history save that of the recorded testimony of the rocks. These give ample and uncontrovertible proof that the earth had most extraordinary and marvellous prehistoric or mythical periods of convulsive history, far beyond the comprehension of mortal man. No time such as we term "years" can be put to the age of the earth, yet by knowledge or observation, carefully and scientifically applied, and wrought out by sundry geologists who have made it their study, we have been enabled, with much perseverance, from time to time to so classify the different periods, aided by the respective representations of the fossil flora and fauna found in the many series of formations, or in their absence, from the Archæan or most ancient formation upwards through the Primary, Secondary, Tertiary, &c., until we arrived at the Glacial and Post Glacial periods denominated by geologists as the Anthropozoic—from the Greek words "*anthropus*" man, and "*zoe*" life, when relics of man were beginning to be found. This short cut, if you will allow me to term it, of geological explanation, brings us up to the time—years, months, and days were not yet arranged—when Adam was formed and placed on this great floor of Nature's creation, already prepared for him by the grandest representation of flora and fauna, and also of sun, moon, and stars, that is possible, or, rather, impossible, for the imagination of modern man to conceive.

In his "Domain of Arnheim" Edgar Allen Poe made Ellison maintain that the richest, the truest, and most natural, if not altogether the most extensive province had been unaccountably neglected. No definition had spoken of the landscape gardener as of the poet; yet it seemed to Ellison that the improvement of the landscape garden offered to the proper muse the most magnificent of opportunities.

* A lecture delivered by Mr. WILLIAM MILLER, F.R.H.S., landscape gardener and nurseryman, Berkswell, before the Birmingham and Midland Counties Gardeners' Mutual Improvement Association, November 4th, 1901.

Here, indeed, is the finest field for the display of imagination, in the endless combination of forms of novel beauty, being by a vast majority the most glorious which the earth could afford; in the multiform and multicolour of the flower and the tree, grass, rock, and water we recognise the direct and energetic efforts of Nature at physical loveliness.

It is said there are properly but two styles of landscape gardening—the natural and the artificial. One seeks to recall the original beauty of the country by adapting its means to the surrounding scenery; cultivating trees in

tastes to gratify. It has a certain relation to the various styles of buildings. There are the stately avenues of which there are so many in the country, Italian terraces, and a various mixed old English style, which has some relation to the domestic Gothic or English Elizabethan architecture. Whatever may be said against the abuses of the artificial landscape gardening, a mixture of pure art in a garden scene adds to it a great beauty. This is partly pleasing to the eye, by a show of order and design, and partly moral. A terrace with an old moss-covered balustrade calls up at once to



PEAR DOYENNÉ DU COMICE.

harmony with the hills or plains of the neighbouring land; detecting and bringing into practice those nice relations of size, proportion, and colour which, hid from the common observers, are revealed or apprehended everywhere to the experienced student of Nature. The result of the natural style of gardening is seen rather in the absence of all defects and incongruities—in the presence of a healthy harmony and order—than in the creation of any special wonders or miracles.

The artificial style has as many varieties as there are

the eye the fair forms that may have passed there in other days. The slightest exhibition of art is an evidence of care and human interest. The original beauty of a landscape is seldom so great as that which may be introduced. Of course, everything depends on the selection of a spot with capabilities. A man who is about to build himself a house, or is employed by another to find an eligible site, should look well about before fixing upon a spot—a work well begun is half the battle.

(To be concluded.)



Ceropegia Gardneri.

The species of *Ceropegia* named by "K., Dublin," in a recent note is the one we illustrate. It is an interesting climber for a warm stove, and grows quickly. The peculiar-looking flowers are produced in profusion. Cuttings root freely in clean sand, given slight bottom heat in a stove temperature. Another species, *C. Sandersoni*, is of a more fleshy habit of growth, and also, with stapeliiformis, deserves a place in all gardens where plants of a botanical interest are appreciated.

Gooseberries and Currants.

The best manner of growing Gooseberries and Red Currants on walls is in the form of cordons. They must be planted when young, and with single stems. If only one stem is allowed to a plant they may be planted 6in apart. If three, one on each side a central stem, 18in apart, each cordon branch having a space of 6in between it. Should spur growths not form freely on the main stem, shorten the latter at each winter season, and carry up a new leader in summer until the limit is reached. The side growths in summer must be shortened to four leaves, and further shortened at the present season to within an inch of their base. Unlike bushes in the open, the winter pruning may be carried out now. When the cordon branches become old and worn out, a young shoot should be encouraged near the base, and eventually trained to take the place of the old one. —RUFUS.

The Yellow Wood.

It is strange that a flowering tree of such marked beauty as the Yellow Wood, *Cladrastis tinctoria*, or *Virgilia lutea*, as it has been erroneously called, remains so uncommon. Possibly the somewhat ungainly growth in youth (says "Meehans' Monthly") is accountable for the lack of interest shown in it; and also that it does not seem to seed freely. Young plants in a nursery are invariably passed by as the intended purchaser looks for something pretty for a lawn specimen. But a ten or twenty-year-old specimen has quite a different effect. Then one sees a fine, symmetrical, small tree of spreading habit, the ends of the branches almost pendulous, and the whole distinct in character. The leaves are pinnate, but broadly-rounded. In June, drooping racemes of white, pea-shaped flowers are produced in sufficient profusion to look neat and showy without an appearance of over-doing the decoration. These flowers harmonise with the light green leaves and general character, and are very pleasing. *Cladrastis tinctoria* is a native of the United States, but is not widely distributed—another cause for its being but little known. It is grown well in the Royal Gardens at Kew.

The Worth of Potatoes.

It would be a curious thing were it established—not at present seriously suggested—that the humble Potato is a counter-active to cancer, and highly satisfactory too, because for three centuries in several European countries a most malicious prejudice existed against the wholesome tuber. When first brought from Peru, in the beginning of the sixteenth century, it was given out in France and currently believed that the Potato caused leprosy, and when this fiction was disproved it was held in the next century to generate fever. The superstition was a fine illustration of the readiness of mankind to believe without evidence, and it persisted down to the time of Louis XVI. Parmentier had demonstrated that the Potato was a sound and useful food, and King Louis glorified it in the eyes of Court and crowd by appearing in public wearing in his buttonhole Parmentier's little mauve flower. It will be a surprise to many persons probably to learn that in Germany Sir Francis Drake was regarded as the first to introduce the Potato to Europe. At Offenbourg in Baden, a statue to Drake was erected in 1853 for having brought the Potato from America in 1586. In strict order of priority, the several introducers would be the Spaniards, Hawkins, Drake, and Raleigh.

Cherry House.

Structures that are to be employed for supplying ripe Cherries from the middle of April onwards must now be closed. Be sparing of fire heat at the commencement, not employing it unless necessary to maintain the temperature at from 35deg to 40deg at night, and 40deg to 45deg by day, ventilating when the temperature is at 50deg. Syringe the trees and other surfaces early on fine afternoons, so as to admit of the buds becoming dry before nightfall. The border will be sufficiently moist for some time through the removal of the roof-lights. If not, it must be brought into a thoroughly moist state by applying water, or, if weakly trees, liquid manure. Trees in pots, if at all dry, will require repeated supplies of water to secure the thorough moisture of the soil to the base of the pots.—PRACTITIONER.

The Green Mullein.

Writing to a Midland contemporary in August last, Mr. George Martin, of Bellman's Cross, Shatterford, states that he then had three plants of the Green Mullen, or, as Culpepper spells it, Mullein. The largest grew about 6ft high (blossom yellow); it came as a weed. He let it stop to see what it would come to. It started something like a Foxglove, and grew a tall stalk. The leaves at the bottom are about 18in long, and 7in to 8in wide. They get smaller gradually to the spike at the top, which is 20in long and full of seeds, something like Indian Corn. There are six or eight smaller spikes lower down the stem. It was nearly covered with caterpillars that grew nearly 2in long. This rare plant grows wild about Shatterford (Kidderminster).

Plums and Sweet Cherries.

The best form of trees for walls is undoubtedly the fan-trained form. This form of tree readily admits of branches from any part being easily renewed, so that it is quite possible to remove worn-out branches and fill up the vacancy with a vigorous young growth. The trees may be furnished with a regular number of branches, which ought not to be too thickly disposed, but sufficient to cover the available training space. The side shoots growing out from the main branches should be stopped during the summer at the fourth leaf, which will encourage the production of fruit spurs at the base, to which the growths may be shortened at the winter pruning. During the extension of the main branches some shortening must be carried out at this season, according to the strength of the growth made and the disposition the shoot has towards its base to form fruit buds. However, the most vigorous leaders will not require leaving longer than 2ft, and others in proportion to their strength. Spaces which may be bare of spur growths may be filled by allowing side growths to extend, but the aim must be not to overcrowd.—SOLENT.

Valuable Economic Plants.

To the Indians of South America the world is mainly indebted for such articles as tobacco, cocoa, maize, potatoes, cotton, quinine, manioc, vanilla, indiarubber, and sarsaparilla. Dr. Bertoni, the director of the Agricultural College at Asuncion, Paraguay, states that they are also acquainted with a tree whose sap is alcoholic and similar in taste and colour to a rough red wine. Another plant which they use, and of which they have until now carefully kept the secret, is a sweetening plant of remarkable power. This latter plant was discovered a short time ago by Dr. Bertoni, and some leaves of it were sent to the Royal Gardens at Kew by the British Consul at Asuncion, Mr. Cecil Gosling. The plant, which is said not to be found further south than the highlands at the source of the River Monday, is a modest shrub a few inches in height, growing side by side with weeds and luxuriant grasses. The leaves are small, and the flowers still more diminutive. The Indians call it "Sweet Herb," a few leaves being sufficient to sweeten a strong cup of tea or coffee, and giving also a pleasant aromatic flavour. The discoverer believes, however, that the sweetening power bears no relation to the saccharine properties of sugar, and according to one of the Kew Bulletins, the officials have not succeeded in identifying the plant with any other in the Kew Herbarium. There is stated to be "no doubt that the plant possesses very strongly the power of stimulating the sensation of sweetness, for the smallest piece of a leaf causes a persistent sweetness in the mouth."

Gadding and Gathering.

"HERE AWA', THERE AWA'."

When conversing with a friend recently upon the qualities of Veitch's race of winter-flowering Begonias, he hazarded the opinion that they were being made too much of. The man, surely, knew not of what he spoke; for I am safe to say not an eighth of the gardeners in England, Ireland, Wales, or Scotland have ever yet seen such a batch as are now in flower in the long span houses at the new Feltham Nurseries, away west of London. Imagine 800 stout and robust plants in 5-inch and 6-inch pots of the older variety Winter Cheer, whose mass of flowers glow in colours of deep shining crimson-carmine. How very few are the plants of any sort that the gardener has at his command at this period 'twixt the waning of Chrysanthemums and the flush of forced spring bulbs and Azaleas. Every year we feel the want, yet we get very little "forrarder."

Besides Winter Cheer—plant of many graces—there are a number of other varieties, some almost new, others better known because older. These are Mrs. Heal; Winter Perfection; Myra, pale rose-pink; Venus, bright rosy-carmine; Ensign, one of the best, with long and graceful flower clusters of crimson-pink flowers; Julius, with pink, Balsam-like blossoms; and the new Ideala, which is probably too rare to recommend much so far. It, however, advances a new and dwarfer type. Mr. Heal, as raiser of these Begonias, is busy endeavouring to produce a white variety and a yellow one, after which he thinks he will rest satisfied. Oh! vain hope for so active an hybridiser.

[New Plants at Feltham.]

That charming Begonia named incomparabilis (or is it *B. Frœbeli incomparabilis*?), with tall and erect stalks, bearing showy crimson-scarlet flowers, should not be allowed to wait for a place in any garden; it is well worth a sacrifice on somebody's part, only to be secured for one's collection. A cross between *Begonia natalensis* and *B. socotrana* has given as progeny a wonderfully floriferous beauty, with more erect habit and less rounded corollas than we view in Gloire de Lorraine, besides which the tone of colour is quite distinct. It is difficult to define—the colour is—but if I describe it as a soft, peach colour, slightly shaded throughout with bluish-lilac, this may be accepted as somewhat near the mark. The cross would seem to prove beyond all question that Gloire de Lorraine's parents were *B. socotrana* and *B. Dregei*, which lineage has frequently been questioned.

Kalanchoes, &c.

Amongst other splendid novelties that ought to be noted are *Kalanchoe flammea*, represented by a well-grown batch; *K. coccinea*, which is an easy plant to cultivate, though not nearly so valuable as *K. flammea*. The latter should be kept at rest until after new year, when cuttings of the top of the young shoots may be struck in bottom heat. Pot the rooted plants into a good hazel loam mixed with about a half proportion of crock dust, and avoid leaf soil or peat—at any rate, a very minute proportion of mould will be ample.

Whoever is acquainted with *Luculia gratissima* will well understand the wonderful show that a dozen single-stem plants of this very fragrant (though agreeable odour) blush-pink flowered subject can furnish. Such a sight is to be enjoyed at Feltham. Then there are a number of robust specimens of the new blue-flowered *Coleus*, named *thyrsoides*. This, for January, is likely to be very extensively grown in time to come. *Moschosma riparium*, with *Spiræa*-like flowers and odorous green foliage, has also its way to make. The newly-introduced *Jacobinia chrysostephana* has reached this Veitchian establishment, but until a stock has been raised nothing need be offered in the way of description. What I persist in terming a real good novelty is the somewhat fluted *Senecio auriculatissimus*, with smooth, almost fleshy, dark green ear-shaped leaves, twining stems, and terminal clusters of bright golden starry flowers, similar in form to those of a common Daisy. I hope it may be well grown, and then we will possibly all agree that it is beautiful in every way.

—WANDERING WILLIE.

Early Forced Vines.

These start less promptly than Vines in pots, especially those which have not previously been subjected to early forcing, and they should not be hurried, time being allowed to insure an even break and sturdy growth. The buds of those started last month are now moving. Raise the temperature to 55deg, and increase it a degree or two daily, so as to have it 60deg to 65deg at night, when the Vines are producing their leaves. In forcing to time, it is sometimes necessary to induce growth by a brisk moist heat of 70deg

to 75deg, continuing it until the buds have fairly started growing, then allowing it to fall to 60deg to 65deg, with 5deg to 10deg rise in the daytime. This is important, a moderate temperature being essential to secure short-jointed wood, and stout, well-developed foliage; but a close atmosphere is very prejudicial, and cutting currents of air equally disastrous, therefore ventilate carefully and early, seeking advancement and solidification of the growth under sunshine, closing early, so as to husband the sun heat as much as possible.

Outside borders must be protected against cold rains and melting snow. A 6in thickness of dry leaves, with a little litter over them to prevent them blowing about, is effective, especially when covered with spare lights. Houses to afford ripe fruit during May ought to be started at once, fine weather being required from commencing to finish; quicker work only needlessly strains the Vines. A bed of leaves and stable litter placed on the floor, turning a portion of it daily,



CEROPEGIA GARDNERI. (See page 540.)

so as to supply ammonia vapour to the atmosphere and prevent drying of the material, the soft glow of moisture being favourable to a good break, and is a saving of fuel. Outside borders must have the needful protection from frost. A few inches thickness of dry leaves, and a little litter over them, answer when the Vines are planted inside, but where the border is all outside, a covering of warm litter is preferable, two-thirds of leaves to one of stable litter affording a less violent but more lasting heat than manure alone, adding fresh as necessary.

The inside border must be rendered evenly moist by applying tepid water or liquid manure. Start with a night temperature of 50deg in severe weather, 55deg in mild weather, and 65deg by day, except the weather be cold, when 55deg will be suitable. This slow work is better than a forcing heat, which induces a weak growth, and, except for special purpose, it is well not to exceed those temperatures until the growth commences. Depress young Vines to the horizontal line, or lower, to insure the regular breaking of the buds. Maintain a moist atmosphere by syringing daily, but avoid excessive moisture and keeping the Vines dripping wet, which excites the production of aerial roots from the rods.—G.



Apple, Norfolk Beauty.

In September last I saw the trees of this Apple laden with the fruit you comment upon in the Journal of last issue, page 518, and since then I have had an opportunity of tasting the fruit both cooked and uncooked, and find it exactly what you say. I look upon Norfolk Beauty as quite one of the best Apples in cultivation for the kitchen. The flavour of the fruit is so different to that of Warner's King as to at once dissipate any idea of its being identical with that variety. The flesh of the latter is quite white, while in the new comer it has quite a creamy tint. All the trees I saw of it were fruiting heavily, and this in a season when Apples were scarce, especially in the Norfolk region; and this fact should render its extended cultivation a certainty.—E. MOLYNEUX.

Christmas on Duty.

I imagine I hear some poor journeyman exclaim, "Oh, dear! don't mention it. I never spent a more miserable day in my life!" I have heard this expression uttered time after time regularly as Christmas comes round. Now very shortly it will be with us again, and no doubt before this the almanac has been carefully and fearfully studied with the object of finding out who will have the unenviable distinction of being "on duty" that day, and many will be the sighs of relief or vain regret uttered in every bothy throughout the land upon ascertaining the fate in store for them on that particular day. I have known some young fellows who would be able to name the unfortunate one quite twelve months beforehand, so eager were they to gratify their curiosity.

Undoubtedly the bothy is not the best place in which one would choose to spend the festive season, especially in those bothies where some of the fortunate inmates are near enough to go home, leaving one or two less favoured ones behind to pass the time away as best they can. But still there are some who will make themselves happy even under these adverse circumstances, and if he is possessed of sufficient forethought he can, with the outlay of a few shillings, get together a goodly store in readiness for the eventful day. Such seasonable things as nuts, oranges, cigars, the inevitable roast beef and plum pudding, and last, but not least, a wee drop o' something "short," with which to drink the health of absent friends both far and near. These, with the aid of one or two old cronies specially invited for the occasion, will make Christmas not a day to look forward to with dread, but rather with happy anticipation. Greater cheerfulness may also be imparted to the bothy by fixing sprigs of Holly round the walls and over the fireplace, not forgetting a piece of Mistletoe hung up in some convenient place under which the ancient custom may be duly observed should the occasion arise. Thus, by adapting himself to circumstances, the unfortunate one may have a real jolly good time, although he be, like me, "on duty."—J. H. M.

[A very seasonable letter, and full of a good spirit.—Ed.]

"Hardy" Fruit Grown Under Glass.

Mr. J. T. Thurston, writing from Stowmarket, Suffolk, brings to notice a letter that was published in the East Anglian "Daily Times" for November 16, which letter refers to an exhibit of fruit staged at the Ipswich Horticultural Show on November 12 and 13. In the interests of exhibitors of hardy-grown fruit, we think that Note VII., as printed in the schedule for the fruit exhibition yearly held under the auspices of the Royal Horticultural Society at the Crystal Palace, should always be applied to exhibits of open air (or hardy) fruit. The note we mention explains: "By 'grown in the open air' it must be understood that the trees have both flowered and set their fruit, as well as ripened it, without any other protection beyond netting or a coped wall."

This limits the exhibitor pure and simple to stage "open-air" fruit. All exhibitors and officials of horticultural societies should make themselves acquainted with the "Rules for Judging," 1899 Code, 1s. 6d. post free, from R.H.S. Office, 117, Victoria Street, S.W. What exhibit is meant in the letter, part of which we give below, we know not, but the question is asked "whether it was altogether satisfactory from the point of view of those who wish to encourage the cultivation of hardy fruit? Indeed, to put the question briefly," continues the writer, "I should like to ask whether the Apples and Pears exhibited were really hardy fruits, and did not owe much of their excellence to the fact that they had been, to some extent, nursed under glass. It is well known that there is a system of nursing

the trees and feeding them with a pap-boat, by which fruit can be obtained twice the size of that grown under the ordinary conditions of the garden. A young tree is planted in a large pot or tub with perforated sides, and, after being kept all the winter in an enclosed house, it blossoms two or three weeks before the usual time, the fruit thus getting a great advantage at the start. The tree may or may not be taken outside, when the fruit is well set, and placed, still in the pot, in rich soil, so that straggling roots may help in nourishing the tree. About this time the pap-boat comes into use, and the tree, its fruits thinned perhaps to three or four, is stimulated with various artificial mixtures, amongst which a solution of iron, for giving colour, plays its part. It is wonderful what can be done by such a system. Apples and Pears 2lb or over in weight are produced when it is difficult to get them up to 1lb on trees grown under more natural conditions. Such fruit is, no doubt, very interesting at shows; but is it exactly what ought to be encouraged? Does it not tend to dishearten those who have no orchard house? And would it not be better, if it is impossible to have different classes for fruit grown under, or not under, glass, to let the exhibit cards state that it is grown under glass, partially under glass, or in the open?" Naturally, these questions are of importance, and care on all hands must be exercised when exhibits of hardy fruit are considered at exhibitions.

Araucaria imbricata from Seed.

In answer to "H. M.," page 524, concerning the rearing of *Araucaria imbricata* from seeds, I beg to state that about five years ago plants were reared from seeds taken from a tree fruited in the pleasure grounds at Osborne, Isle of Wight; also a year or two previous to the above date plants were raised at Nash Court, Faversham, Kent, from a "Monkey Puzzle," which bore fruit there. In both of the above cases the seeds, which somewhat resemble a very thin Tulip bulb, were sown under glass. After germination, which took place in the course of a few weeks, they were potted off singly into small pots, and grown on in a greenhouse temperature for a couple of years, after which they were planted in the open. According to my experience, their growth is somewhat slow during the first two years of their existence; but after reaching the planting-out stage they quickly go ahead on becoming established.—WILMOT H. YATES, The Gardens, Rotherfield Park, Alton.

Apple, Barnack Beauty.

A local newspaper is responsible for the following interesting account of the above-named Apple, taken from the "Fruit Trade News":—"We know of few Apples that equal this grand late dessert variety. Certainly none surpass it, so a few details about its culture on pyramid trees will be read with interest by many thousands of growers and planters of the king of fruits especially.

"We have too many useless varieties of fruit trees on the fruit lands of the United Kingdom. Among those we advise should be grown none will give greater satisfaction than Barnack Beauty. The fruit weighs from four to six ounces each, the bulk possibly coming out at four ounces when well grown. Thus for marketing in boxes they are perfect, on account of their rich sweet vinous flavour, their size and colour.

"We should like to see 10,000 boxes of evenly graded Apples of this variety put on sale for the Christmas trade. They would make as much money as the famous Newtown Pippins. There is no Apple grown all the world over that will surpass it. With these and several other high-grade varieties we can easily hold our own against outside competition from any quarter. England is the true home of the Apple. We have said that Barnack Beauty is a splendid cropper. In corroboration of this a fruit-grower sends us samples of the fruit he has raised, with the significant information that from ten trees he gathered over one ton of fine fruit. Reckoning 44lb to the bushel we shall have as near as possible 25 bushels to the ton. Now, if we put the value of the Apples at 10s. a bushel in the markets, the ton will be worth £12 10s. The trees from which the fruit was gathered are pyramids, and reckoning 193 trees to the acre, that is, having them set 15ft apart each way, we should, if the yield was proportionate to the ten trees referred to, get Apples of the value of £237 10s. from an acre of land.

"Now, we have taken care to under-estimate things in the above in every item, so that it is absolutely clear that if every ten trees on an acre, when the trees, after ten years, had got into good fruiting condition, yielded a ton of fruit between them, the monetary output would astound at least the ordinary agriculturist, who pins his faith to Carrots and Corn. We always avoid over-estimating probable crops or profits, we never base any argument in favour of fruit-growing upon what has been on a small or restricted area of land, or from a few fruit trees; at the same time, we insist that the lessons we give are object lessons of sound, practical and undoubted value, and even if we say that an acre of Barnack Beauty, or kindred profitable kinds of the fruit trees we commend will give a return of less

than half the total worked out—that is, £100 or £75, or £50—even the Apple culture in England on advanced lines offers as much inducement to skill, capital, and labour combined as any industry in the cities or towns."

If the above information is to be relied upon, and I see no reason why it should not be, or at least treated with respect, then it is surprising that an Apple with such a reputation is not more generally known. Of several catalogues before me I can only find it offered in one, and in that it is classed as a culinary variety. From the above information it appears to be one of the very best market varieties extant, and, looking at it from a commercial point of view, one which will pay the rent and leave a handsome profit after. I should like to know what description the late Dr. Hogg gives of it in his "Fruit Manual," as I am not lucky enough to possess a copy of that useful work. Perhaps



AMERICAN BLACKBERRY, KITTATINY.

someone will supply the information, and if the Editor of the Journal can give us an illustration of it, I have no doubt it will be appreciated by others as well as myself. Seeing, then, that Barnack Beauty has few equals, it is a wonder the Council of the R.H.S., when compiling their schedule of the great Fruit Show at the Crystal Palace, do not enumerate it in the prize list. It is not wholly unknown to them, as I see they have it named in the list of dessert Apples at the end of the schedule. I have said more than I intended to about an Apple that I know nothing at all about; but if it results in a little wholesome discussion on the merits or demerits of it, my time will not have been spent in vain.—R. M.

American Blackberry, The Kittatiny.

Following "H. D.'s" able cultural article on Blackberries that appeared in our fruit number of October 10, we illustrate on page 543 one of the best of the large-fruited American varieties that also succeed in this country. These large American kinds are the descendants from *Rubus occidentalis*, popularly called the Western or Virginian "Raspberry." Most of the leading nurserymen include this variety in their lists.

Societies.

National Amateur Gardeners' Association.

Annual Dinner.

A company of ladies and gentlemen representing the Central Society of the National Amateur Gardeners' Association, and numbering about 100, enjoyed an evening together in the Venetian Chamber of the Holborn Restaurant, presided over by Mr. T. W. Sanders, on Thursday last, the 5th inst. The president was supported by Messrs. H. T. Wooderson (the treasurer), W. A. Hobbs, A. J. Foster, and H. G. Bourne, each at the head of separate tables; and on right and left by Messrs. George Gordon, V.M.H., D. B. Crane, C. T. Druery, V.M.H., H. J. Jones, C. B. Green, and Mr. Finch (the secretary), amongst others. A first-rate dinner was provided, and the usual photograph having been taken, the programme of the evening was entered upon. The Royal toast was loyally honoured, and, secondly, a toast to the association and its affiliated societies. Both came from the chair, and, as president of this association, Mr. Sanders, in a few direct and exceedingly well-rendered sentiments, summarised the year's work. It is satisfactory to be able to review a year of progress, of cobwebs brushed away, of re-arrangement in the ranks of those who govern, the fixture of a new and higher subscription fee to meet the varied financial demands of the society's exchequer, and of sundry "prunings," all to the end that greater fruitfulness may result. The association numbers between 600 and 700 members, with branches at Ladywell (Kent), Liverpool, Gosport (Hants), Seapoint (near Cape Town), and one in New Zealand. The chairman was strongly in favour of providing prizes—and plenty of them—but they ought to be of a useful nature, "something like this," said he, picking up a silver fruit tray that stood before him.

Then again, the highest talent ought to be procured for the lectures at their meetings, and unless members subscribed liberally and yearly (that's the great point), how could the ablest men be secured? Time is money to busy men, and, as Mr. Sanders further remarked, "it is quite unfair to expect such persons to devote evenings without being monetarily refunded." And, lastly, the association's library can always be added to, and is open to great improvement, each of the foregoing features demanding money for their promotion. The toast having been received, the treasurer (Mr. Wooderson) responded.

The numerous valuable Championship Trophies variously provided by Messrs. Carter Wright, Sutton and Sons, Dobbie and Co., H. J. Jones, Robert Sydenham, F. Cant and Co., and others, in competitions during the year were then distributed to the fortunate winners. Mr. D. B. Crane eloquently proposed a bumper to "The Trade and Donors of Trophies and other Prizes," and was sincere in the thanks he rendered on behalf of the association, expressing a natural wish that these prizes would be forthcoming with the same liberality that had characterised the past. On behalf of the trade, Mr. Jones, of Rye-croft, Lewisham, suitably responded.

Succeeding the foregoing recognitions came Mr. Druery's toast on behalf of the vice-presidents and officers, suffused with this pteridologist's perennial supply of pawky expression, and followed by not less resistible humour from Mr. Geo. Gordon. A toast to "The Press," from Mr. G. Foster, was responded to by Mr. Harrison Dick, of this Journal. The ladies, too, were toasted, and that enthusiastically.

It must be explained that the toasts and speeches were interposed between songs, recitations, and pianoforte selections. Each of the artistes rendered their allotted items with great success—Miss Florence E. Fowler at the piano, Miss Edith Pearce with a recitation, and sweet songs from Miss C. Wright. The gentleman artistes were Messrs. G. H. Day, W. A. Hobbs (who directed the musical arrangements), H. J. Jones, and T. Winstone Cook. Those with ability, when asked to take a part in the programme at their annual dinner, never demur, and to them is due sincere thanks, and this was accorded by those present. About eleven o'clock the meeting dispersed, but not before a chain of hands had joined at the singing of that imperial song, "Auld Lang Syne."

Hessle Gardeners.

The above society held its usual fortnightly meeting at the Parish Schoolroom, Hessle, on Tuesday last. Mr. G. Cottam, of Alma Gardens, Cottingham, gave a very practical and instructive paper on "Point Judging of Horticultural Exhibits." There was a good attendance at the meeting, which was presided over by Mr. Blair, Hessle Cottage Homes. A good discussion followed, in which the members gave vent to the feelings between judges and exhibitors. Many practical and useful points were brought forward and thoroughly discussed. Votes of thanks to the essayist and chairman terminated the meeting.—J. F. D., Yorks.

Beckenham Horticultural.

The members and friends of this society are greatly indebted to Messrs. Sutton and Sons, who on Friday last very kindly countenanced a representative of their firm (Mr. Cox) to give a lecture on "The Primula." Mr. Cox brought with him both lantern and numerous slides from photographs. The lecturer dealt chiefly with *P. sinensis* and its varieties, commencing with the primitive form as first brought home from China, and flowered in the gardens of a Mrs. Palmer at Bromley about 1820, and from that tracing the evolution of the many beautiful varieties up to the present. Pictures of specimen plants of these were placed on the screen and their good qualities dilated upon. Snowdrift, for instance, opens very early, and retains its flowers very tenaciously. White Pearl, though sent out so long ago as 1880, still holds its own as one of the best. *P. stellata* also claimed attention, the lecturer stating that the cultivation of this type is increasing, and rightly so, too. A few hints on culture were given; one to be noted is, always to pot sufficiently deep for the plant, but not below the collar. Some other species were recommended by the lecturer, viz., *P. obovata*, *P. floribunda*, *P. Sieboldi*, and its varieties, that would well repay the cultivator for time and trouble. Hints on the cultivation of these were furnished. At the close a very cordial vote of thanks was accorded Mr. Cox for his able, instructive, and entertaining lecture, and the librarian, Mr. Webster, desired to tender the best thanks of the society to Messrs. Sutton and Sons for their kindness.—T. C.

Binfield Mutual Improvement.

The usual fortnightly meeting of the Binfield and District Horticultural Mutual Improvement Society was held on Tuesday, December 3, at Miss Shaen's Room, Mr. Howell in the chair, when Mr. Botley read an interesting and instructive paper on "Decorative Table Plants." There was a good attendance of members, and in the discussion which followed Messrs. Howell, Paine, Bungay, Else, Benn, Galliford, Busby, and others took an effective part. The essay appears this week in the Journal. Mr. Paine exhibited a beautiful group of Orchids, including *Cypripediums*, *Oncidium*s, and *Zygopetalum*s, and gave valuable cultural and other information respecting them. Mr. Benn brought some lovely Chrysanthemums, *Souvenir de Petit Ami*, and *Begonias Gloire de Lorraine*. The very large size of the plants, grown in 48's, was the subject of remark by many of the members of the society. A hearty vote of thanks to the lecturer brought a pleasant and profitable evening to a close.

Chester Paxton

The annual general meeting of this society was held in the Lecture Theatre of the Grosvenor Museum on Saturday, Mr. N. F. Barnes, president, occupying the chair. The hon. secretary, Mr. G. P. Miln, submitted a statement of accounts for the past year, and he was able to report that a small profit had been made out of the recent exhibition of fruits and Chrysanthemums held at the Town Hall, although the weather at that time was most unfavourable, and interfered to a great extent with the attendance of the public. The list of members and subscribers had during the year increased from 447 to 482, which was considered satisfactory. Mr. Barnes's term of office having expired, he was, on the proposition of Mr. R. Wakefield, accorded a hearty vote of thanks for his services as president, and in replying he proposed Mr. John Weaver, Christleton Hall, as his successor, who, in accepting office, promised to follow in the footsteps of his predecessor. Votes of thanks were also accorded to the retiring vice-presidents, Messrs. E. Stubbs and A. Ellams, their successors in office being Mr. John Dutton and Mr. Joseph Ryder. The hon. secretary was also thanked for his past services, as was also Mr. Armstrong and Mr. Wakefield for auditing the accounts of the society. Mr. G. P. Miln was re-elected secretary, and the following will form the committee for the coming year:—Messrs. J. D. Siddall, N. F. Barnes, R. Wakefield, J. Taylor, E. Stubbs, A. Ellams, A. W. Armstrong, J. Wynne, S. May, A. E. Goodman, W. Pringle, S. Garner, A. Ellis, J. Jackson, and H. Rowe, with Mr. R. Newstead as consulting naturalist.

Croydon and District Horticultural.

The usual fortnightly meeting was held at the Sunflower Temperance Hotel on Tuesday last, December 3, when Mr. W. J. Simpson presided over a capital meeting. The preliminary business having been disposed of, a capital paper was read by Mr. A. W. Wade on "Lilies." Mr. Wade first dealt with the geographical distribution and habitats of the different varieties of Lilies, their classification and characteristics, not forgetting their beautiful, charming form and colour. The cultivation of the Lily received special attention at the hands of Mr. Wade, whose long and varied experience was of value to those present. Mr. Wade also noted the great commercial interests in the Lilies

as evidenced in the vast importations from Japan, Bermuda, &c., and their cultivation in this country for decorative purposes. There was an interesting and pleasant discussion after the reading of the paper, and a unanimous vote of thanks was accorded to Mr. Wade. The interest of the meeting was further enhanced by the inspection of a large number of paintings of Lilies exhibited by Messrs. W. Harris and J. Gregory, to whom also a vote of thanks was given. The paper for next meeting, December 17, is "Loudon, his Life and Works," by Mr. Harrison Dick (the *Journal of Horticulture*).—J. GREGORY, Hon. Sec.

Devon and Exeter Gardeners'.

Mr. Charles Berry, lecturer in horticulture to the Devon County Council, gave a demonstration on the evaporating and preparing of fruit for preserving purposes to the members of the Devon and Exeter Gardeners' Association at Exeter on Wednesday night. Mr. J. P. Rippon presided. The lecturer spoke of the waste in Devonshire orchards caused by the high winds in autumn, and so much fruit coming ripe at one time. By the evaporating process a lengthened period for its use was obtained, the question of heavy freight was met, and a handsome profit realised. Fifty-six pounds weight of Apples as they were gathered yielded 6lb of dried or evaporated fruit. Vegetables of various kinds could be treated in the same way, and it was believed that before long the process would be taken advantage of for the purpose of feeding troops in any country where transport was difficult, such as in South Africa.

Dundee Horticultural Association.

The annual general meeting of Dundee Horticultural Association was held last night in University College, Mr. David Croll, president, in the chair. Mr. T. Butchart, secretary, submitted his report. It stated that at the beginning of the session seventy members were enrolled, seven of whom had removed to another district and two had withdrawn. At present the membership numbered 110. The chairman expressed gratification at the satisfactory nature of the report. From the treasurer's report it appeared there was a balance in hand in favour of the association of £6. All the office-bearers were re-elected, with the exception that Mr. William Kennedy, Ardarroch, was appointed librarian in room of Mr. T. Brown, Balcairn Gardens, who has retired. Messrs. Bethel, Macrae, Nieoll, Dixon, Meston, and Brown were added to the council. Several new members were admitted to the association. The question of awarding medals for meritorious exhibits during the ensuing session was under discussion. The secretary said that the association being affiliated with the Royal Horticultural Society of London, had the right to purchase two medals for the purpose of encouraging the objects of the association. Discussion followed, and some difference of opinion was expressed concerning the advisableness of having competitive exhibitions. Mr. Cairns, Balruddery, was of opinion that competitions ought not to be introduced, but that it should be left in the hands of the judges to award medals during the session to such exhibits as they considered worthy of them. He moved that the whole matter be remitted to the council for consideration. This was seconded. Several members pointed out that the fact of it being known that medals were to be awarded necessarily introduced the competitive element, which, however, they did not consider a bad thing. The chairman doubted whether the constitution of the association permitted of their engaging in competitions. Ultimately Mr. Cairns' motion was agreed to.

Liverpool Gardeners.

The second meeting of the session was held in the Secretary's Office, Victoria Street, on Saturday evening last, when Mr. J. Guttridge, of the Wavertree Botanical Gardens, gave a lecture on the *Hippeastrum* (*Amaryllis*), Mr. T. Foster presiding. Mr. Guttridge dealt with his subject in a most convincing manner, as was only natural, for few have worked harder during the last few years to foster and inculcate the value of this, now one of the finest bulbous flowering plants, the many thousands of visitors attending the gardens being fully alive to the great progress made. A useful discussion ensued, after which the usual votes were tendered.—R. P. R.

Reading and District Gardeners'.

The second meeting of a series arranged to be held at the Reading College in connection with the above association took place on the 2nd inst., when Mr. W. Iggulden gave a paper on "Tomatoes." There was a good attendance of members, presided over by Mr. Neve. Mr. Iggulden, in introducing the subject, said that forty years ago the taste for Tomatoes had not been acquired, but at the present time we were a nation of Tomato-eaters. Having referred to the various varieties that had been introduced between the time when Large Red Italian was grown

to Sutton's Winter Beauty, the lecturer passed on to deal with culture, giving practical details under the following headings: Sowing, soil, potting, fertilising, removing leaves, open air, growing for market, disease, and pests. Many questions were asked, and an interesting discussion ensued, in which the following took part: Messrs. Neve, Hinton, Alexander, Exler, Cretchley, Wilson, Lever, Burfitt, Dore, Judd, Chamberlain, Goodman, Townsend, Bright, and Rumbold. A hearty vote of thanks was accorded Mr. Iggulden for his valuable paper.

Royal Meteorological.

At the ordinary meeting of the Society, to be held, by kind permission of the Council, at the Institution of Civil Engineers, Great George Street, Westminster, on Wednesday, the 18th instant, at 7.30 p.m., the following papers will be read:—"Further Observations and Conclusions in Relation to Atmospheric Transparency," by the Hon. F. A. Rollo Russell, F.R.Met.Soc.; "Remarkable Phosphorescent Phenomenon observed in the Persian Gulf, April 4 and 9, 1901," by W. S. Hoseason; "On the Mechanical Principle of Atmospheric Circulation," by Captain R. A. Edwin, R.N., F.R.Met.Soc. P.S.—As the balloting list for the Council for the year 1902 will be prepared at the next Council meeting, it is requested that those Fellows who wish to suggest Fellows for election on the new Council will send in proposed names *before* the 17th inst. W. M., Assist. Sec.

Wakefield Paxton.

The programme of meetings for the fourth quarter session, 1901, held at the Paxton Room, Woolpacks Hotel, Westgate, each Saturday evening, at eight o'clock prompt, is as follows:—1901: December 14, "Gardening for Schools," Mr. W. J. Middleton, Bradford; December 21, "The Place of Bacteria in the Economy of Nature" (illustrated by lantern slides), Dr. P. J. Cammidge, Public Health Laboratory, County Hall, Wakefield; December 28, Musical evening. 1902: January 4, "A Plant—its Life and Work," Mr. Alfred Gaut, Yorkshire College; January 11, "Wild Wales" (illustrated by lantern slides), Captain H. S. Goodyear; January 18, "Some World Famous Buildings and Monuments" (illustrated by lantern slides), Mr. J. Swire; January 25, "The Storybook of Nature" (illustrated by lantern slides), Mr. H. Crowther, Leeds Museum; February 1, "The Life History of the Domestic Fowl, from the Egg to Maturity" (illustrated by lantern slides), Mr. W. E. Corden; February 8, "Spring Flowering Bulbs and their Forcing Properties" (with specimens), Mr. L. Twigge; February 15, "Some Physical and Chemical Properties of Fertile Soils," Mr. John Cryer, Bradford; February 22, "Wakefield in the time of Charles the Second," Rev. A. Chalmers; March 1, annual meeting; sale of periodicals.—T. H. MOUNTAIN and A. S. NICHOLSON, Hon. Secs.

Woolton Gardeners' Improvement.

The usual monthly meeting of the above society was held in the Mechanics' Institute on Thursday, December 5, Mr. Hitchman in the chair. Considering the inclement weather that prevailed, the attendance was exceedingly good, the hall being comfortably filled. Mr. Charles Sherry, from the Botanic Gardens, Liverpool, was the essayist of the evening, the subject being "Gloire de Lorraine Begonia." This gentleman treated his subject in a remarkably masterly manner, and the audience were spellbound from beginning to end. Commencing as he did with its history and development, he gave to the members much valuable information regarding the climate and the nature of this Begonia's parentage, which, he insisted, had much to do with the successful cultivation of any new hybrid that may be produced. He then described the many and varied purposes this popular Begonia may be used for. Special emphasis was laid on its suitability for hanging baskets, drooping as it does so gracefully over the edges of such, which seems to be its natural propensity. He next dealt with its cultivation, advocating a good start with this Begonia (as is given with other favourite flowers, such as the Chrysanthemum) by selecting sturdy flowerless cuttings, avoiding side shoots at all times for this purpose. His favourite compost was then given, which consists of two parts of Kent loam, one part good ordinary fibrous loam, and one part leaf soil, with an addition of silver sand to keep the whole porous. This, Mr. Sherry remarked, produced good, sturdy plants, well developed, and, other conditions being favourable—viz., heat, shade, and moisture—would produce plants of a highly floriferous nature. Turnford Hall was also mentioned and highly recommended by the essayist. Nice specimens, well-flowered, of Begonia Gloire de Lorraine and Begonia Caledonia were exhibited by Mr. Stoney, Camp Hill Gardens, which drew forth several comments. A discussion followed, in which Messrs. Finch, Haigh, Waterman, and Stoney took part. A hearty vote of thanks was given to Mr. Sherry for his admirably-written and well-rendered essay; also to Mr. Hitchman for presiding.—J. S.

Garden Walks.

Garden walks may be made of anything that is hard enough to keep a firm dry surface—brickbats, freestone, clinkers, &c., may be used, as there should always be sufficient good gravel on these to hide whatever is in the bottom. In pleasure grounds drainage should always be carefully provided, but in a kitchen garden with Box edging there is not so much need for drains, as the wet soaks into the soil. In making a walk close to, or near a mansion, the side of the walk next the wall should be kept up the same as if it was the centre of the walk, as shown in the shaded figure (1), so that the water may not lodge there and cause dampness in the building. It is always necessary to have a drain to carry off the rain from the roof, and where there is

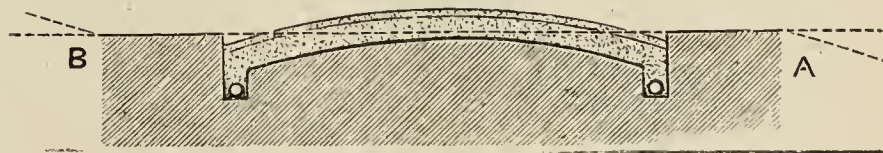


FIG. 1.—SECTION OF A GARDEN WALK.

a border between the walk and the mansion, as shown in our section, the drain for this purpose should be confined as far as possible within the border, so that it can be seen to in case of stoppage without breaking into the walk. These should always be laid with glazed socket pipes with their joints properly cemented, and to provide for any defective joints it is a safe plan to have them below the level of the foundations.

Young men sometimes find a little difficulty with regard to the level at the junction of two walks running in opposite directions on sloping ground. Take the instance of such a case in a



FIG. 2.

kitchen garden. Suppose the line *a*, in the small figure (2), represents the slope of the ground, or say the level of the edge of the walk *A* in our ground plan, figure (3). Drive a level peg exactly in the centre of your cross walk *B*, figure (3), in a line with the edge *a* and level with it. Level from this peg for the edges, placing other pegs *c c* at each side. The same operation has to be gone through at the other end of the cross walk, when the levelling of its sides may be proceeded with. As will be seen by the two lines in the section, figure (2), *a* representing the height of edges *A*, figure (3), and the dotted line *B*, the level of the cross walks. The latter is below the level of the former on the high side, and above it on the lower side at their junctions, having the edges of both walks levelled up to within a foot of

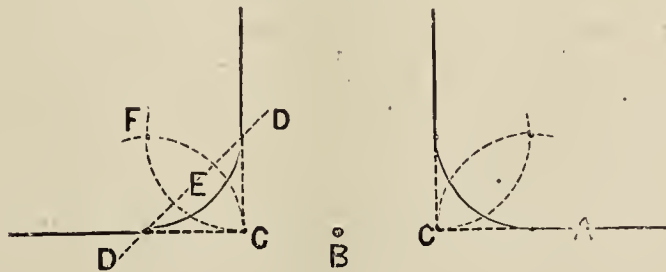


FIG. 3.

the pegs *c c*. From these measure along each edge a distance equal to half the width of the walk, as at *D D*, and insert pegs exactly where the Box edging is to come. From these points stretch a line across the corner, as shown by the line *E*, and level the ground from the one point to the other, continuing it out to the peg *c*. This will gradually verge the one level into the other. Now place the looped end of a piece of string over the pegs at *D D* from *c*, draw lines crossing at *E*, and from this centre carefully mark the quarter of a circle from *D* to *D* to form the corners, by drawing the sharp point of a peg along the level surface. Right-angle corners should always be so rounded off, for as a rule square corners get trodden down and become unsightly.—R. I.

Hull Fruit Traders.

At the annual dinner of the Hull Fruit Buyers' Association on Thursday, December 5, the position of the fruit trade was freely discussed. Mr. Shentall, of Chesterfield, wrote that, although the port of Hull had grown, the railway accommodation was just the same as it was twenty years ago so far as the North-Eastern and Midland Railways were concerned. The North-Eastern Railway Company ought to give greater facilities for both passengers and fruit, or the trade would leave the port. Several speakers expressed similar views, and gave figures to show the falling-off in the trade.

Young Gardeners' Domain.

We all know what a horticultural exhibition is, or what it should be. It should be a collection of fruit, flowers, vegetables, brought together for the inspection of the general public, or of the members and friends of the society organising the show. Everything exhibited should be brought as near to perfection as possible. It should be the whole object of the society to further horticulture in all its branches. Each exhibitor should feel an interest in the work, and have a love for it, not showing merely for a prize; earnest members bring success to a society. But in how many instances do persons show in order to further the love of gardening, and not solely in the hope of securing a prize? In very few, I am afraid. Those societies which are able to offer valuable prizes are sure to have plenty of competitors; those not able to do this do not attract many exhibitors. However, we know that we have some who will do this simply for their love of the cause, and it is to those few that our thanks are due for keeping together most of the smaller horticultural societies in this country.

Exhibitors' Mistakes—and Remedies.

Coming to the subject of my paper, "Exhibitors' Mistakes," how many persons are free from them? Very few, I venture to say. Many a ladder has been made by these errors, each rung of which might have written upon it "mistake," but by each of these mistakes the exhibitor has been enabled, by remedying them, to mount to the top and obtain success.

These mistakes frequently commence at home, especially when the exhibitor is a young beginner. They often try, and think it possible, to grow almost everything, instead of selecting and specialising some particular branch. The first step should be to see what the garden will grow well, fit for showing. Whatever is grown should be grown well; a few things done well are much better than a large number which are only moderate. Another thing to be considered is the time that can be given to the work of preparing for exhibition. Many try to do too much. The time that can be spared for the purpose should be carefully calculated beforehand, and only those classes should be attempted for which ample time can be spared.

Many a prize has been lost by not allowing the time to put it up properly. In the first place, if cut flowers are to be shown, the box or tray should be perfectly clean, and every flower should be so placed that it can be well seen. The back row should be high enough to be seen above the others, and the front row not so high as to hide those behind.

Another mistake is often made by not taking sufficient care in blending the colours of the blooms so that the whole may harmonise. It would be very bad taste in arranging them to place say two of one colour immediately together, or to put pink with red. The object should be to have the stand give as good an effect as possible. I should arrange something like the following:—white, red, yellow, pink; white, purple, yellow, and so on, never, if possible, allowing the colours to clash. They can all be arranged and made to look beautiful if the exhibitor will only take the time to do it properly. There is a great difference between a box of flowers properly arranged, standing up well, and tastefully blended as to colour, and a box placed anyhow on the table.

Another thing I should like to draw attention to, and one that is often overlooked, is the placing of exhibits on the exhibition table and not naming them. I think it is of the greatest importance that all exhibits should be correctly named. It is most useful to visitors to the show, who are thus enabled to take down the name of any particular thing they may see, and which they may wish to try themselves.

Correctly named exhibits are also instructive to young beginners, who may perhaps wish to make a start in exhibiting. All names should be distinctly written. This naming, I think, is more particularly useful in the case of fruit exhibits—Apples, Pears, &c. Visitors to the show can often then name fruit of their own growing by comparison with those shown. I should like to see all societies make a rule to the effect that everything exhibited at their shows should be correctly named if possible. By doing this I believe they would greatly aid the work of horticulture. I would not go so far as to disqualify for being without names, as the person showing may not be in a position to name correctly, and no name is better than a wrong one; but everything short of disqualification should be done to induce competitors to correctly name each exhibit.

Now, going back to the arrangement of exhibits, the same mistake is made frequently in vegetables as well as flowers. One group or collection of vegetables may be just thrown together in a confused mass in the basket, while another, no better in point of quality, will have every vegetable arranged to the best advantage to catch the eye. There will be no doubt in the mind of the judges as to which is the best exhibit; that arranged with care being certain of the verdict.

Yet another error into which disappointed exhibitors fall, and one of very bad taste I consider, is that of airing their

fancied grievances publicly. Of course I do not mean to say that judges are infallible, and are always right in their decisions, but in nine times out of ten, if these dissatisfied persons' cases are thoroughly looked into, the award of the judges would be upheld. You will find that an exhibitor who thinks he has been unfairly treated will usually point out the good blooms or the good points in his exhibit, not looking at the weaknesses instead.

The remedy for this is obvious. Competitors should look out for the unsatisfactory points in their exhibits, and not wait for the judges to point them out. If they do this, and try to strengthen these weak places, I am sure they would feel much more satisfied, both with themselves and the judge's awards. I had the honour once to be in a very close competition in a large class for forty-eight blooms. I had to be content with second place, but not before the judges had had a lot of trouble. The blooms were all pointed over more than once, and came equal. The arrangement was equally good. The judges were in a bit of a fix. The prize was a cup, and so could not be divided. However, something had to be done, and after an hour had passed the judges spied some dust on the boxes in which my flowers were arranged. This lost me the Cup.

I was, of course, disappointed, but I shook hands with my opponent and congratulated him, and I meant it, too. I had made a mistake in not having my tray clean, and I took special care never to repeat this mistake. My old friend is still in the field of competitors; sometimes he is defeated, but he always comes up smiling, ready for the fight again. He believes that a person who knows how to lose well will know how to win well. I have mentioned this incident in order to show how careful a competitor should be in the little points. Remember, it takes very little to turn the scales when the weights are nearly equal, and that little may mean a great deal to the exhibitor. I have endeavoured to point out a few mistakes that exhibitors are most likely to make, and if I have not made it quite clear as how to remedy them, I would say, "Learn to do better from past mistakes."—G. CARPENTER, *Byfleet*.

The Aspidistra.

The Aspidistra is a plant everywhere grown and admired. It has been well christened the Parlour Palm, for it is one of the few plants which will stand and flourish in our "parlours," unlike other plants that so often under the care of servants often gradually dwindle away, unable to stand the negligence which our house plants are so often subject to. For "furnishing," it is undoubtedly one of the most useful, and will stand draught and knocking about, so to speak, better than any plant I know. Many a nursery foreman or head gardener has grumbled his heart sore when his Palms, Crotons, and such like come back after a big furnishing job in a sad state, with leaves dusty, and the plants themselves so very dry that it takes weeks to bring them back to the clean and healthy condition they were in when they were sent out. Some of them, perhaps, die a premature death on account of the draught and negligence they had been subjected to while out on hire.

The Aspidistra, if grown well, does away to a great extent with these forebodings of the nurseryman and head gardener. I say if well grown, because they are often grown in such a careless way (on account, perhaps, of their willingness to be neglected) that their leaves are short, thin, and sickly. I like to see them with long leaves, standing pretty well erect, just drooping at the tips, with good colouring; not hanging as it were almost lifeless about the top of the pot, and so dwarf and puny as to be of little or no use. The variegated type is certainly the best, although the green variety comes in at the right time for intermixing with the variegated variety, or in a group of our lighter coloured foliage plants.

Although the Aspidistra will do in a poor light, it thrives better when given plenty of room in a cool house or conservatory with abundance of light. A good plan is to stand them on a pot, thus giving them plenty of space to spread out their graceful leaves. It likes plenty of moisture in the summer time, but should be watered sparingly during the winter months, in a temperature of 50deg to 60deg. They should not be allowed to become too pot-bound, and should be shifted in March, and, if large enough, divided so as to work up a stock. The compost should consist of two parts good loam, one part leaf mould, and one part sharp sand, potting firm. To obtain long and well-coloured leaves a little of Clay's manure is beneficial; Clay's being the favourite. Given two or three times during the growing season, about a dessert spoonful to a 6in pot, and watered in, always allowing a good drainage, and keeping the leaves thoroughly clean by constant sponging and syringing. What gives a better effect than a group of well grown plants intermixed with several of these most useful of our greenhouse friends? I have often thought that a group of Chrysanthemums would have a far more pleasing effect if between each plant a well grown Aspidistra was placed, hiding as it would the long, bare stem so prevalent nowadays amongst these most popular plants. Too much, I think, cannot be said in favour of the Aspidistra, and a more useful plant will be hard to find.—H. KITLEY.

South Africa.

Cottage Gardeners.

The Stutterheim district in Cape Colony is the home of the South African cottage gardener. This industry is in the hands of the remnants of—what is locally called—the “German Legion.” These men, who had served in the Crimea, came to the colony at the conclusion of hostilities, and received assisted grants of land in this district. At this time this part of the colony—though not far removed from the coast town—was a wilderness of veldt and hill. The German Legion transformed it into a veritable garden, and though none of them have amassed any wealth to speak of, they have all managed to earn a comfortable living out of their labours.

The gardens are all close together, the boundary of each being marked off by cairns of stones. All are laid out in the same way, each house being an exact duplicate of its neighbour. These houses are built of mortar, mixed with dagga, with thatched roofs. Each cottage has its front room, running the length of the building; behind this are a couple of small bedrooms; back of all is the kitchen—in reality the dwelling-room. As some families have increased a wing has been added to the main building. Each gardener, as a rule, owns a couple of horses and a cart or two, but beyond there is no other to be met with in the valley.

Another fact which differentiates the cottage gardener from all other agriculturists in Africa is that no native labour is employed, each family itself providing all that is necessary in this respect. In the centre of this little hive of industry stands the church—a small stone building; behind it is the clergyman's house, the one pretentious building to be met with here. These cottage gardeners supply the King William Town market with most of its garden stuff. The rail runs close here now, and transport is easy. When the Legion first settled down there was not a yard of rail in the country. At this time the people used to drag their own carts into market. Then the Government stepped in, and added to the grants of land by providing horses. The liabilities incurred in this way have all been long since cleared off. There is not an English name to be found in this valley, though the occupiers can all speak English, and the children, who are educated at the neighbouring village of Dohne, can all read and write it.

As soon as the daylight closes in on the valley the people all retire to their own homes and stay there. An hour later the valley will be illuminated by a multitude of lights. These are the reflections of the home-made candles shining through the windows. In the centre of all, hanging from a cross-bar, arranged in front of the church, is a lantern burning to guide travelling strangers.

At Christmas time the valley awakes from its usual quiet. Parties and dances are arranged, and the people pass this season in the same hearty way as do their kith and kin at home in Germany. Many of the Legion have gone the way of all flesh, though a few are still left. Some of their descendants have gone out into the world. There is a celebrated colonial lawyer who first saw the light in this spot, but the majority have settled down to follow in their father's footsteps.—D. G. R.

Potato Cultivation in West Cornwall.

Seed and forage merchants have recently imported into West Cornwall a large quantity of early Potato seed, for which, owing to the high prices—Myatt's £5 10s. per ton, and Duke of York's £6 10s.—there is at present little or no demand. From the exceeding slowness of the sales since the seeds arrived, it is more than probable that a greater part of the seed in stock will have either to be sold at reduced prices, or be left in the hands of their present owners. Hitherto it has been the practice of the market gardeners to rush off to the importers and buy as soon as the seed arrives, for fear the seed would be insufficient to supply all the customers. But times have changed. For several seasons in succession early Potato cultivation has proved so unremunerative that growers are by no means anxious to give for their seed any price that may be asked, as many of them do not care whether they till any early Potatoes or not. Besides, market gardeners nowadays are better informed about crops and prices than they used to be. They know that last season's crop of Potatoes in Lincolnshire, whence the bulk of the seed comes, was so remarkably heavy that the farmers had to import labourers from Ireland to dig up the crop. In fact, early Potato seed is so abundant that it will be impossible to maintain the high price at present demanded. The market gardeners of West Cornwall, therefore, need not be in any hurry to make their purchases, as the best informed confidently state that prices will drop at least 50 per cent. below present quotations before the season is much older.



Hardy Fruit Garden.

PRUNING AND TRAINING WALL TREES.—As a rule the most favourable weather should be chosen for giving the winter attention to all kinds of wall trees. When the weather is comparatively mild, and the soil dry, the pruning can be the most expeditiously carried out. Following close upon the pruning, the re-disposal of the branches and shoots may be taken in hand, first clearing the trees of any insect pests, or incrustations of moss or fungi with which they may be infested. A thorough cleansing of the trees and walls is at this season very beneficial, and ensures a clean start being made in spring. If necessary, the bricks should have vacant spaces between them filled with a mixture of mortar and cement.

PEARS.—Pears succeed well on walls in whatever form of trees they are grown. Walls having sufficient space for good extension of the branches should be furnished with fan-shaped trees, while for low walls and trellises the espalier form is the best. Trees can be secured and planted, having a suitable number of branches already originated; but where there are not sufficient more may be originated by closely pruning in the winter. Groups of spurs ought not to be established too closely together, nor should they be allowed to become elongated and permitted to grow too far from the wall. In shortening the side growths leave two or three buds at the base. In the case of summer-pruned shoots the buds to be left will be plump, and showing indications of forming fruit buds; while those that have been neglected in this respect will most certainly be backward; and much will depend upon the condition of the roots as to whether they plump up to fruit buds or remain as wood buds. Where the trees have very powerful root action, possessing roots deep and strong, the trees can only be brought into fruitful condition by judicious root-pruning.

APPLES.—Apples are not the most profitable fruit on walls, and, as a rule, should not be grown in such positions except as cordon trees, the best form being the diagonal single cordons, planted 18in to 2ft apart. Train at an angle of 45deg. By no means neglect the summer pruning of these, or they cannot fruit satisfactorily. The winter pruning consists of shortening the summer-pruned shoots to basal buds, leaving one or two. If the trees are old, and have very long and crowded spurs, thin these out.

MORELLO CHERRIES.—These Cherries are most productive trained in fan-shaped form on walls, allowing free extension of branches and shoots. The latter may be trained somewhat thickly, about 3in apart all over the trees, leaving them at full length. It is important to cut out the old fruiting shoots close to the point where they originated. This may be done immediately the fruit has been gathered, but if not at that time, then at the winter pruning and training. The Morello also succeeds when the growths are spur-pruned, but the most profitable method is to retain only the young shoots of a vigorous character and well ripened. There will, of course, be a number of superfluous shoots which must either be cut out entirely or shortened to form spurs. A few of such are permissible on the front parts of branches, but limit the number so as to avoid crowding.—LYMINGTON, HANTS.

Fruit Forcing.

VINES—EARLY FORCED IN POTS.—Where the pots are placed on pillars in the pits the fermenting material will need frequent additions as the heat declines, bringing the material up about the pots, so as to maintain a steady bottom heat of 70deg to 75deg. Too much heat at this stage is injurious to the roots. A gentle warmth, however, accelerates root action, and admits of higher feeding than when the roots are not excited into activity. The temperature of the house should be gradually raised, so as to have it 60deg to 65deg at night by the time the Vines are coming into leaf, allowing an advance of 5deg to 10deg by day, admitting a little air at 70deg, without lowering the temperature or causing an inrush of cold sharp air, and closing early in the afternoon. Disbud as soon as the bunches can be detected, reserving the most promising. Stop the growth about two joints beyond the bunches, allowing a leaf or two more where there is room.

Remove the laterals up to the bunches, and allow those beyond to extend as space permits, without crowding, it being important that the foliage have full exposure to light and air, encouraging that amount only. Two or three joints of extension are sufficient for Vines in pots, the crop preventing further

lateral extension. If the Vines show two or more bunches on a shoot remove the least promising before they flower, and do not allow more to remain than will be necessary for the crop.

Damp the floors in the morning and early afternoon. Where, however, fermenting materials are employed the necessity of damping will not be so great as where the heat is solely derived from the hot-water pipes. In the latter case the evaporation trough should be filled with guano water—1lb to 20 gallons of water—or clear liquid manure from stable or cow byres; and that may also be employed for damping the floors after closing the house, or early in the afternoon, neat drainage requiring to be diluted with five times the bulk of water.

MIDSEASON HOUSES.—The Vines should be pruned and at rest; if not, complete the work and cleanse the house. Where the Grapes are partially cut the remainder may be removed with a good portion of wood attached, and if the stems are inserted in bottles of water the bunches will keep admirably in a dry room from which frost is excluded. Then the Vines will be liberated for pruning, and the house for cleansing, repairs, and painting. A long and complete rest invigorates Vines, and early pruning effects that better than anything else.

LATE HOUSES.—Vines that have the foliage all off will only require fire heat to exclude frost; but there must not be anything like a moist, stagnant atmosphere, or the Grapes will speedily damp and decay. Leaky roofs are a chief cause of Grapes keeping badly, and wide laps are not much better, as the wind drives the water from them all over the upper side of the berries, causing them to spot and rot. Grapes cannot be kept under such circumstances, and the sooner they are cut and bottled the better. A temperature of 40deg to 50deg suffices for the thick-skinned Grapes. Muscats require a mean temperature of 50deg. The air must be kept in motion by a gentle warmth in the pipes, and ventilation given whenever there is a chance of securing a change of air without danger of letting in more moisture than expelled.—**ST. ALBANS.**



•• All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

NAME OF MOTH (Correspondent).—The large and somewhat damaged moth is the Unicorn, or Convolvulus Hawk (Sphinx Convolvuli), a handsome but rather rare species. It occurs towards the end of summer usually, flying about flowers at night. The caterpillar feeds on various species of Convolvulus, mostly on the wild Bindweeds.

PUDDLING A POND (W. H. Y.).—"I am writing to ask if you can please recommend to me a book concerning the making and puddling of ponds, or perhaps you can kindly furnish me with information as to the best means of making a pond which leaks watertight. The pond in question is oblong in shape, and formerly held water, but has leaked for the last few years. It is about 10ft deep, but holds very little water. Plenty of clay is at hand for the work, but before commencing I should like to have a little advice as to the best time of year, winter or summer, to set about it, &c."

[It is very important to have the bottom and sides firm, otherwise any giving way in these will cause cleavage in the clay, and leakage ensue. It is well, therefore, to ram this inside of the pond before commencing to puddle, and then put on thin layers of the clay and ram as hard as possible, not using more water than necessary to prevent the rammer sticking to the clay, and for compacting this as firmly as possible. Half a dozen layers of clay, each about 3in thick, and rammed into a compact mass, should, on firm ground, be impervious to water. The work may be done either in winter or summer, some preferring the winter, as the frost causes the clay to fall when thawed, and thus forms a finer mud-like surface. The great thing, however, is to compact the clay into an impervious mass, and not be sparing of the thickness, as the thicker the better, only the bottom and sides are equally stable with the clay puddle. Sometimes the ground has been made up, and this naturally solidifies, and the shrinkage occasions rents in the clay puddle, and leakage is the consequence. We should proceed with the work during the winter as open weather admits.]

CONSTRUCTING A CUCUMBER HOUSE (J. M. W.).—"I am thinking of putting up a Cucumber house, and I would like some information as to height, arrangement of piping, and the best sort of heating apparatus. The house would be about 90ft by 12ft. Please give a list of the best Cucumbers to grow for market purposes, and also the best methods of cultivation."

[The house should be about 4ft high at the sides, and preferably with about 18in of this of glass. If a span-roof the height from the floor to the ridge should be about 8ft. The trellis for training the plants should be about 1ft from the glass. The piping (4-inch) are best placed at the sides of the house above the beds for planting the Cucumber plants, a flow and return on each side, and a row on each side outside the bed next the pathway. Thus you will have six rows of 4-inch piping, and to heat this amount of piping we advise a wrought iron terminal end and flued saddle boiler, 42in in length, and 16in width and depth inside arch. The beds for the plants may be 3ft wide and a foot in depth, though the large growers use wood troughs about the width mentioned, and 6in in depth, the beds being raised about a brick on edge above the floor. No bottom heat is employed, and only provision made in the roof for moderate ventilation. Perhaps the best marketing Cucumber is the Rochford or Market Favourite. Improved Telegraph is also an excellent variety for marketing work. The details of cultivation are given from time to time in our "Work for the Week" column.]

CLEANSING HOUSES INFECTED WITH TOMATO DISEASE (Germicide).—"In a recent issue of the Journal you advised for cleansing houses infected with Tomato disease lime or basic slag in soil, and washing woodwork with sulphate of iron, 8oz to gallon of water and 1 pint sulphuric acid. As we are now, like most growers, cleansing up for next season's operations, we shall be much obliged if you will, through your Journal, say whether 8oz to 1gal is the correct amount to use? We thought it rather a large percentage of iron sulphate. Would such a strength be likely to affect soil injuriously if watered with the solution, omitting the acid, and whether it would be likely to badly and permanently discolour woodwork? Why is the acid prescribed?"

[We have no recollection of giving the formula you mention—viz., 8oz of sulphate of iron and 1 pint sulphuric acid to a gallon of water. There is a mistake somewhere. We advise using an iron sulphate solution as follows:—Water, 50gal; sulphuric acid, 1 pint; iron sulphate, 25lb. Place the iron sulphate in a wooden vessel, and pour upon it the sulphuric acid, and then add by degrees the 50gal of water. This preparation may be used with great advantage in those cases where a disease has previously existed, as it destroys resting spores that may be concealed in crevices of brickwork or on the ground. The very nature of the solution indicates that it must not be applied to painted woodwork, which should first be cleansed with soft soap, water, and a brush. Then use the solution on the walls and floor, or ground. For applying to soil ½ oz to 1 oz per square yard of iron sulphate is sufficient. It has no effect on resting spores, or on the mycelium of fungi in the soil, nothing less than 10 per cent. being of any avail in the course of our experiments on resting spores; and that is only suited for external use, not for incorporating with soil. It is better to use basic cinder phosphate, 1lb per square yard, and kainit, 6oz per square yard, and dig into the soil some time in advance of putting out the plants.]

MALMAISON CARNATION LEAVES DISEASED (F. H. S.).—"I am sending you two plants of Malmaison Carnation. Could you tell me, through the *Journal of Horticulture*, the cause, also the best remedy, for the spots and blotches on the foliage? They are grown in a light, airy house, the day temperature being kept from 60deg to 65deg, the night temperature from 50deg to 55deg, with a little top air. Is it the effects of green fly affecting the young growths in an early stage, or is it a disease?"

[The young plants have some of the leaves infested by the Fairy-ring of Carnation fungus, *Heterosporium echinulatum*, which often proves destructive to cultivated Carnations and Pinks even outdoors, especially when the plants are exposed to a chill, or when a moist, warm period in spring is followed by a sudden lowering of temperature. Owing to the characteristic arrangement of the small black clusters of the fruit of the fungus in irregular circles, seated on pale spots on the leaf, resembling the "fairy-rings" formed on lawns and in pastures by *Marasmius oreades*, the determination of this disease is easy, even without microscopic examination. The spots run together, involving the whole leaf in many cases, and seriously impair the appearance and health of the plants. As regards repressive measures, all diseased leaves should be picked off and burned. By consistently attending to this point the disease does not spread, and the danger of a reappearance of the disease the following year is much diminished, for the sclerotia are destroyed, otherwise these form in the dying leaves, remain passive for a time, then produce minute conidia, which, when placed on living leaves of Carnations, give origin to the first patches of disease. The foliage of plants grown under glass should be kept as free from moisture as possible, as, if the foliage is dry, floating spores

alighting on the leaves cannot germinate. Secure good ventilation, and avoid syringing or wetting the foliage. Spraying the plants with ammoniacal carbonate of copper solution checks the disease. It is prepared as follows: Form 1½ oz of copper carbonate into a thin paste by adding sufficient water; finally dilute to 1½ gal with rain water. Merely coat the foliage with the finest possible film of the solution, and repeat occasionally.]

NAME OF SLUG (R. G.).—The "slug," or whatever creature you sent, had entirely decomposed in the transit, and was a putrid mass when exposed.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (A. L. F.).—*Begonia socotrana*. (H. G.).—1, *Notholaena flava*; 2, *Selaginella helvetica*; 3, *Pteris Wimsetti*. (J. Ford).—*Helleborus niger* var. ("Hill").—1, *Dendrobium aureum* probably, but very poor specimen to name from; 2, *Piper metallicum*; 3, *Selaginella africana*; 4, *Pellionia pulchra*; 5, *Polypodium* sp., please send a good frond bearing spores; 6, next week. (J. J.).—*Laelia autumnalis*.

NAMES OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (F. P. B. O.).—Pear was absolutely rotten; Apple is Downton Pippin.

EDITORIAL NOTICE.—Our readers can greatly assist in adding interest to the pages of "The Journal" by their kindly contribution of timely notes and notices, and at the present period of the year there may be photographic examples of well-grown fruit, &c., growing or otherwise, that would be worthy of reproduction. The Editor would be pleased to have such subjects for consideration and probable use. He does not guarantee to pay for prints unless by special agreement.

Trade Catalogues Received.

Hogg and Wood, Kelso, N.B.—*Forest and Ornamental Trees, Conifers Shrubs, Roses, &c.*

M. Herb. (Herb & Wulle), Naples, Italy.—*Seeds.*

Sutton & Sons, Reading.—*Sutton's Amateur's Guide in Horticulture.*

Remington Typewriters.

Messrs. Wyckoff, Seamans, and Benedict, 100, Gracechurch Street, London, E.C., send us a tiny booklet entitled "Miss Remington and the Hotels," with illustrations of various large hotels in London, Leeds, and elsewhere. The booklet advocates the superiority of the Remington typewriting machines.

Covent Garden Market.—December 11th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	2 0	to 6 0	Lemons, Naples, case	24 0	to 30 0
" dessert ...	3 0	6 0	Oranges, per c/s ...	4 0	16 0
Bananas ...	8 0	12 0	Pears, English, ½ sieve	6 0	8 0
Figs, green, doz.	0 0	0 0	Pears, French, crate	4 0	9 0
Grapes, Alicante, lb.	0 9	1 0	Pines, St. Michael's,		
" Colman ...	0 8	1 6	each ...	2 6	4 6
" Hamburgh ...	0 0	0 0	Plums, ½ sieve ...	0 0	0 0
" Muscat ...	1 6	2 6	Walnuts, ½ sieve ...	2 0	3 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz. ...	5 0	to 6 0	Lilium l. rubrum ...	1 6	to 2 0
Asparagus, Fern, bnch.	1 0	2 0	Lilium longiflorum ...	4 0	5 0
Bouvardia, white,			Lily of the Valley, 12		
doz. bunches...	5 0	6 0	bnchs ...	12 0	18 0
Bouvardia, coloured,			Maidenhair Fern, doz.		
doz. bunches...	5 0	6 0	bnchs. ...	4 0	6 0
Camellias, white...	3 0	0 0	Marguerites, white,		
Carnations, 12 blooms	1 3	1 9	doz. bnchs. ...	2 0	4 0
Cattleyas, doz. ...	8 0	12 0	" yellow, doz. bnchs.	0 6	1 0
Chrysanthemums,			Odontoglossums ...	5 0	6 0
specimen blooms,			Primula, double white,		
doz. ...	1 0	4 0	doz. bunches...	5 0	6 0
" white, doz. bnchs.	4 0	8 0	Roses, Niphetos, white,		
" coloured, doz. bnchs	3 0	8 0	doz. ...	1 0	2 0
Cypripediums, doz. ...	3 0	4 0	" pink, doz. ...	2 0	4 0
Eucharis, doz. ...	4 0	5 0	" yellow, doz. (Perles)	1 6	2 0
Gardenias, doz. ...	2 6	3 0	" red, doz. ...	0 0	0 0
Geranium, scarlet, doz.			Smilax, bnch ...	1 0	2 0
bnchs. ...	4 0	5 0	Stephanotis, doz. ...	0 0	0 0
Hyacinth, Roman,			Tuberose, gross ...	3 0	4 0
doz. bunches...	8 0	9 0	Violets, single, doz ...	1 6	2 6
Lilium lancifolium alb.	2 0	2 6	" double, doz. ...	3 0	4 0

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5 0	to 12 0	Ferns, var, doz. ...	4 0	to 18 0
Araucaria, doz. ...	12 0	30 0	Ferns, small, 100...	10 0	16 0
Aspidistra, doz. ...	18 0	36 0	Ficus elastica, doz. ...	9 0	12 0
Chrysanthemums, doz.	6 0	30 0	Foliage plants, var, each	1 0	5 0
Crotons, doz. ...	18 0	30 0	Lycopodiums, doz. ...	3 0	0 0
Cyclamen, doz. ...	10 0	12 0	Marguerite Daisy, doz.	6 0	8 0
Dracæna, var., doz. ...	12 0	30 0	Myrtles, doz. ...	6 0	9 0
Dracæna, viridis, doz.	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
Erica gracilis, doz. ...	10 0	12 0	" specimens ...	21 0	63 0
" caffra, doz. ...	15 0	18 0	Primulas ...	3 0	4 0
" hymalis ...	9 0	15 0	Shrubs, in pots ...	4 0	6 0
" alba ...	12 0	18 0	Solanums ...	8 0	10 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Leeks, bunch ...	0 1½	to 0 2
" Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz	1 0	1 3
Batavia, doz. ...	2 0	0 0	Mushrooms, forced, lb.	10	1 0
Beans, French, per lb.	0 8	0 9	Mustard & Cress, pnnt.	0 2	0 0
Beet, red, doz. ...	0 6	0 0	Parsley, doz. bnchs ...	2 0	3 0
Brussels Sprouts, ½ sieve	2 0	2 3	Potatoes, English, ewt.	3 0	4 0
Cabbages, tally ...	1 6	3 0	Radishes, doz. ...	0 9	1 6
Carrots, doz. bnch. ...	2 0	2 6	Shallots, lb. ...	0 2	0 3
Cauliflower, tally ...	4 0	6 0	Spinach, bush. ...	2 0	3 0
Corn Salad, strike ...	1 0	1 3	Tomatoes, English, lb.	0 4	0 5
Cucumbers, doz. ...	4 0	5 0	" Canary consigt.	4 0	5 0
Endive, doz. ...	1 0	1 3	Turnips, doz. bnch. ...	2 0	3 0
Herbs, bunch ...	0 2	0 0	Watercress, doz. ...	0 6	0 8
Horseradish, bunch ...	1 0	0 0			



Wanted,—for Ireland.

We are great readers of advertisements; why, we hardly know. It is a curious study, the wants and requirements of our neighbours; possibly instructive, too. At any rate, at times we get wonderful eye-openers. We have noticed for several weeks a series of advertisements for instructors in various branches of agriculture were asked for for Ireland. Apparently these men were not forthcoming, for the advertisements were repeated. Last week we got a little light on the subject. In two papers we found three leaders, or, rather, short articles, on the subject.

That stirring man, Horace Plunkett, is at the bottom of it all; he is going to regenerate poor old Ireland, and he is going to do it thoroughly, too. What is going to be done is this. Irish farmers are to be taught how to help themselves. All is not going to be done for them; they are to find part of the funds for their new teachers. That's the way to do it; folks never value what costs them nothing. They want a lively interest in the matter themselves, and then they will see that, first, the money is properly expended, and, second, that the instruction is given to the right persons.

Ireland is not ready yet for expensive agricultural schools or colleges. We should rather speak of what she needs as "itinerant missionary work." The education and improvement is to be brought to the doors of her people, and when they are ready for more, a wider scope will be provided for them. It will appear evident to most of us this is the better plan. The young men cannot be spared from home for college courses; in fact, it is doubtful if they could afford either the time or the money. At any rate, only a few of them could; but now teaching will be provided for one and all. In this way the good seed will be spread over a much larger area, and will have a better chance of fructification. It is a very healthy sign when instruction is asked for.

We read that County Tyrone asks for a lecturer, and offers to bear half the cost. Down, Antrim, Kildare, Wexford, Meath, and West Meath all follow suit, and County Meath is offering prizes for those farmers who are making the best use of the instruction provided. Fermanagh, Kerry, Sligo, Donegal, Galway, Cavan, are all asking for pioneer lecturers to go round and tell the farmer what instruction will do for him. These missionaries are treating

of tillage farming, dairying, poultry rearing, fruit growing, bee keeping, and other agricultural occupations. The Tyrone teacher found he was expected to be at more than 100 centres, where he met audiences averaging 100 or more, practical farmers striving for more light. This must all be very encouraging to those who have the real welfare of Ireland at heart.

We have always argued that good workmen make the best of existing tools. There is such a thing as having too elaborate plant. We have been at that game here; we have established expensive schools and colleges (agricultural), and from these places have emanated some good scholars, or perhaps, we might venture to say professors. The demand is not (in England) equal to the supply, and we have left uneducated what Professor Long speaks of as the rank and file of farmers. We hold it quite practicable that our existing elementary schools might be made the vehicles of much sound agricultural teaching in the rural districts. Now any and every subject is taught but those which would be useful to the country bred child. He is kept at these unnecessary studies till he loses all taste and desire for agricultural work, and then he makes for the over-crowded town. Now, Mr. Plunkett's scheme will utilise existing machinery; will train teachers to take up the work, will provide instructors, one of whose duties will be to supervise the teaching in the schools, and see that the money is not wasted.

By this means there is a chance that the right class will be reached, for, after all, the small farmer and labourer are the backbone of the agricultural community. When Ireland is ready for advanced schools and central colleges of instruction, they will be soon started and fully equipped. We want a Mr. Plunkett here. We are too grand, too vast in our ideas. However, our failures have served as an object lesson to those at the head of affairs in the Sister Isle.

We are very glad to notice a similar scheme is to be set on foot for the girls. After all, on small holdings, we fancy it is the woman and daughters who contribute to make the thing a success, and they will pay for a bit of training quite as well, if not better, than the lads. There are other branches for them beside the dairy and the poultry yard, and if Lady Warwick's ladies score successes, why not their hardier sisters, who are more competent from early association to do the really rough work? We have often regretted that the milking dairymaid will soon only be found in the pages of romance. There is in England a grand opening for stout-hearted, willing milkers. We have lost the breed here, and surely English dairies would be better than Yankee service.

Now, to leave the subject of actual teaching, we come to note the desire for the improvement of stock. There is no good farming without good stock. Any of us who are conversant with the hunting field know how often we come across first-rate Irish horses. Ireland is a capital breeding ground for good horses, and the people are fully aware of their advantages. The Royal Dublin Horse Show is a grand exhibition, and has done much good in offering premiums for sound, useful sires. This society, and the Department of Agriculture, have joined hands, and are trying to cover more ground. But they insist very wisely on the monetary co-operation of the district to be helped.

Thus we find that in a few months 410 stallions have been offered for registration, and there is little doubt that they will leave a mark behind them. We only hope the breeders won't be tempted by high prices to part with their best brood mares. We want quality on both sides, and we have heard persistent rumours of how the best blood is going out of the country to enrich the breeding studs of Continental establishments.

Attend any of the great northern cattle markets, which at this time of the year are full of young stock. The greater part hails from Ireland; indeed, we do not quite know how we should fill our yards without this Irish help. And it is with great interest we read that steps are being taken to provide bulls of pure strain, which at small fees will be available for the man who cannot afford to keep a bull for his own use.

The sheep breeding and pig industry are not going to be left out in the cold. It appears that Drogheda is peculiarly adapted for fruit growing, and therefore the Department has been asked for advice as to the best kind of trees to plant, their cultivation, and the management of the fruit when grown. Jam making and fruit drying are to be started. Co-operative creameries are being started all over the

country, and the Irish egg is no longer to be a disgrace to the Irish hen.

We have heard of the excellence of Irish linen all our lives; but even this is to be improved. Experts are being imported from Holland to teach better methods of growing and dressing the flax, and this seems to us to open out another way for the employment of the women at home.

The whole country seems to be waking up and really trying to "better" itself. Where there is work there is plenty; where there is plenty there is contentment, and contentment is a better panacea for Ireland's wrongs than Home Rule. We perhaps are a little too previous here. We almost fancy this new development has a bit of Home Rule about it. It is their own Irish Board that is doing this good work; no connection with England. Well, all we can say is, this kind of Home Rule is most excellent, and if this is a sample of what our neighbours want, pray let them have it, by all means.

Work on the Home Farm.

The weather has taken another favourable turn, and the plough is again at work. We never saw land ploughed for winter under more favourable conditions. It works well and freely, yet there is sufficient moisture in it to make it lie rough and open to winter frost. For this last autumn ploughing we favour the old style of plough, though it is not so economical in working as the chilled plough. The latter certainly turns the land right over, but leaves it too flat to get the full benefit of the winter weather, which to most soils is so valuable.

We fear that the great failure of 1901 will prove to be that of the young Clover plant. Complaints are rife on every hand, and already we note fields being plastered over with manure preparatory to ploughing for Potatoes or a second Corn crop, which in the ordinary course of things would have lain recuperating for a year, or perhaps two. The net loss will be great, for, cheap as artificial manures are nowadays, there is nothing to equal a good Clover crop in restoring fertility to the soil. It is curious that, under such similar conditions of weather, last year should have produced such a good plant of Clover and this year such a bad one. It shows how little may be needed to upset the farmers' calculations.

After a period of inactivity, everyone is now busy sorting and sending away Potatoes. A sudden demand has sprung up for good quality stuff for exportation to America. The price is only a moderate one; but farmers are wise to take it, and so relieve the home markets of a small portion of the superabundant supply. As most of these Potatoes are loaded on keels in the waterways for transshipping at the nearest port, our railway companies will get little profit out of the trade.

How conservative all creatures are! We have brought up some fowls in an orchard, and they have learnt to perch in the Apple trees. On the approach of winter we have provided them with a comfortable hut, fitted with perches, &c. They pay visits of inspection to it, but continue to sleep in the trees, and will probably continue to do so until we use more forcible persuasion. We once had some sleeping out through 30deg of frost. They were very healthy, but must require more food to keep up body heat under such circumstances.

EXPORTATION OF AGRICULTURAL PRODUCE FROM MISSOURI.—During the last twelve months the total shipment of poultry and eggs from Missouri has been 12,571,467.83 dols. This is an increase of almost 500,000 dols over the previous year. The State Labour Bureau has made some comparisons with these figures as a basis. Aggregating the shipments of Wheat, Corn, Oats, Flax Seed, Rye, Barley, Timothy Seed, Clover Seed, Millet Seed, Cane Seed, Castor Beans, Broomcorn, Hay, Straw, and Apples, and the Missouri hen beats the aggregation 75,000 dols.

LONDON CATTLE SHOW.—Messrs. Webb and Sons, of Wordsley, Stourbridge, made a most imposing exhibit at the Smithfield Cattle Show. They erected an entirely new stand on which was shown what may be justly termed the champion roots and cereals of the year, since they were selected from the crops which have won the principal honours in the open competitions of the kingdom. Webbs' New Smithfield Yellow Globe, Webbs' Mammoth Long Red, and Webbs' New Lion Yellow Intermediate Mangolds were particularly noticeable. Webbs' Imperial Swede, too, was well represented. It holds the record as a heavy cropper, 56 tons per acre having been grown of this variety, whilst as a prizewinner it stands pre-eminent. Webbs' Invincible and Webbs' Green Globe Turnips are grand varieties. Webbs' new Wheats, Barley, and Oats showed up prominently by reason of the large size of the ear, length and stoutness of straw, and the beautiful quality of the grain. A very fine collection of Webbs' leading varieties of Potatoes was another feature.

BULBS FOR BEDDING, &c.

Wm. Cutbush & Son's

STOCK IS IN SPLENDID CONDITION.

CATALOGUES with full particulars free on application.

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20 ACRES of ROSES

THE BEST AND CHEAPEST IN THE WORLD.

CARRIAGE PAID.

Catalogues Free.

20 CHOICE Standard Roses, 25/-; 20 Choice Half-Standard Roses, 22/6; 12 Choice Standard Teas, 18/-; 50 Choice Dwarf Hybrid Perpetuals, 21/-; 12 Choice Teas and Noisettes, 8/-; 12 Choice Climbing, 6/-; 12 Best Hybrid Perpetuals, 6/-; 6 Gloire de Dijon, 4/6; 6 Fairy Roses, 4/-; 6 Moss Roses, 3/-; 6 Pink Monthly Roses, 3/-; 12 Sweet Briars, 3/-.

"ROSES, AND HOW TO GROW THEM," 4d.

All for Cash with Order. Thousands of Testimonials.

JAMES WALTERS, ROSE GROWER, EXETER.

Orchids

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

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Exotic Nurseries, CHELTENHAM.

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Landscape Gardeners and Nurserymen,

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Invite intending planters to inspect their unrivalled

STOCK of ORNAMENTAL & FOREST TREES, RHODODENDRONS, ROSES & FRUIT TREES.

Send for Catalogues and List of Public and Private Works carried out by them.

SEAKALE.

Extra-extra strong for forcing .. 21/- per 100

Extra strong for forcing .. 14/- to 18/- per 100

Strong planting .. 7/6 to 10/6 per 100

LILYWHITE, extra strong for forcing,

18/- to 25/- per 100

LILYWHITE, strong planting.

10/- to 12/6 per 100

ASPARAGUS.

Extra strong for forcing .. 12/6 to 20/- per 100

DICKSONS Nurseries CHESTER

NEW CHRYSANTHEMUMS.

NORMAN DAVIS'S

Selected List of all the finest Novelties for 1902,

Culled from all the Leading Raisers, with reliable descriptions, Post Free.

THE CHRYSANTHEMUM NURSERIES,

FRAMFIELD, UCKFIELD, SUSSEX.

No. 1121.—VOL. XLIII., THIRD SER.

DICKSONS (Chester) CATALOGUE, No. 557,

For 1902,

OF SELECT VEGETABLE AND FLOWER SEEDS, SEED POTATOES, GARDEN TOOLS, and SUNDRIES

Is NOW READY, and can be had post free on application.

Royal Seed Warehouse, CHESTER.

PLANTING SEASON.

Wm. CUTBUSH & SON'S

Stock of TREES, SHRUBS, ROSES, FRUIT TREES, &c., is in a grand condition and worthy of the attention of intending planters.

CATALOGUES post free on application.

Highgate Nurseries, London, N.

AND BARNET. Herts.

FOR PLEASURE AND PROFIT

FRUIT SEEDS

Nothing so profitable and easy to grow.
80 Acres of Saleable Trees.

ROSES

HUNDREDS of THOUSANDS.
Bushes in variety. Packing and Carriage free for Cash with order.
5/- per doz., 6/- per 100.
All other Nursery Stock carried forward.

ROSES IN POTS (from 15/- a doz.)
Ornamental Trees, 91 Acres.
A Superb Collection of Herbaceous Plants.
Four Acres of Glass.
Clean at 8/-, 10/- from 15/- doz.
A.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE
(Nearly 100 pages of Nursery Stock, artistically produced, containing some hundreds of illustrations, and full of valuable information, free on receipt of 1/- for postage. Please mention this Paper.)

RICHARD SMITH & CO. WORCESTER

ASPARAGUS FOR FORCING.

Five year old roots .. 12/6 per 100.

Six year old, extra fine, selected .. 20/- per 100.

Cash with order from new customers.

My Asparagus always makes top prices at Covent Garden, and the Forcing Roots I send out always give the greatest satisfaction.—**J. J. CLARK, Market Gardener, Goldstone Farm, Hove, Brighton.**

JOHN WATERER & SONS,

AMERICAN NURSERY,

Ltd.,

BAGSHOT, SURREY.

Beg to call attention to their magnificent stock of

HARDY RHODODENDRONS, AZALEAS, CONIFERS,

EVERGREENS, DECIDUOUS TREES, &c.

Intending Planters would do well to Inspect the Nurseries.

CATALOGUES ON APPLICATION



Journal of Horticulture.

THURSDAY, DECEMBER 19, 1901.

Irish Bulb Culture.

THE enormous quantities, and the high values of choice bulbs that may be grown on an acre of good and suitable land is astonishing, and somewhat of a revelation to those not well versed in intensive land culture.

Thus an imperial acre holds 250,906 roots or bulbs at 5in. apart. In order to facilitate the working, &c., paths or alleys are, of course, necessary, as well as the bulbs, and so we will say 200,000 bulbs go to the acre. It is a common—or, rather, let us say an abundant—flower root that is not worth a penny, but many of the choicest kinds, as grown at Rush, are worth from 1s. to a much as £5 a root, and if you want to grow some of the finest of Mr. Engleheart's new seedling Daffodils much more must be paid. You can have, for example, a bulb of the variety called Albatross, with its wing-spread petals of snowy whiteness, for £4; and Golden Bell, a giant trumpet Daffodil, for a guinea. Monarch, another fine sort, is priced at twelve guineas: as is also the rare and beautiful Eucharis Lily-like flower called Maggie May Una, an ivory white (without the lion), may be had at two guineas, and a root of the big and beautiful Weardale Perfection is worth nine guineas. Then, even if you purchase a these, you are, so to speak, only in the second row, for there are Narcissi, both rich and rare, such as Ellen Willmott, Peter Barr, Robert Berkeley, Earl Russell, Countess Russell, Lady Margaret Boscawen, and many others that at present no money can buy, so proud of them are their raisers or owners.

It is startling to think what an acre, or even a pole or perch, of such kinds as Maggie May, Ellen Willmott, or Peter Barr would be worth to a successful cultivator. "Ah, sure," said a man of the sea to me one day at Rush,

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

"these roots beat Potato-growing; they beat creation entirely; and it's rowlin' in money you'd hev to be to touch 'em at all, at all, they're so dear to buy." Unconsciously, perhaps, the nail had been struck on the head, and the reason there are not more bulb-growers is twofold at least. Firstly, the best and most suitable land is limited in area and difficult to secure, and then the best and choicest stock bulbs are "so dear to buy." In a word, although bulb growing is undoubtedly one of the most pleasant and profitable of all soil or land industries, it, at the same time, demands capital, and a high order of systematic, industrial, and commercial intelligence.

The stocks must be carefully planted in clean ground and kept rigidly pure or true. The bulbs must be carefully dug up, as the leaves die off every year and require drying, cleaning, grading, and storing in airy sheds, so as to be readily available for sale, and of all the best kinds the stock bulbs must be again replanted on fresh and newly-prepared land. Bulb growing is like chess or billiards, rather uncertain, and now and then the unexpected happens, and there are losses afield from disease, or unsuitable stocks or soil, or the market prices, good last season for certain kinds, may fall below the cultural limit, and new stocks have to be obtained to replace them. Even when in the storing sheds, the loss of a label or a number, or the accidental upsetting of a stack of trays or boxes, may result in "mixed stock," which must be either sold cheaply as mixed, or planted and rogued for a season to get it pure or "true to name" again. In growing bulbs the personal equation is also a very important one. Mr. Arnold White, in his remarkable and suggestive book on "Efficiency and Empire," emphasises the fact that men or a man may do anything he likes provided he wants it enough; and some believe that if a man who knows bulbs well and really wants to grow them, then he may do so on Irish soil quite as well, and in many cases better, and in most instances cheaper, than in Holland or anywhere else.

As we have said, the soils of Ireland are rich, light, moist, and easily worked, and all around the coast there are choice plots and sheltered valleys of alluvium that are especially suitable to the healthy growth and profitable increase of many rare and valuable bulbous plants. The climate again fights for us in the matter. It is moist and genial, equable and mild, and especially so from December until July, when bulbs are rooting and flowering and preparing their crowns and offsets for another year. Almost all bulbs, such as Snowdrops, Crocus, Narcissus, English Iris, Japanese, or Kämpfer's Iris, Tulips, and Hyacinths are half-aquatics in their nature and growth. That is to say that after root action begins and until they flower they enjoy soils that are moist or even wet in preference to dry soils. Thus at Straffan and elsewhere, where bulbous plants generally thrive so luxuriantly on the grass, the lawn in which they grow there is now and then submerged by a foot or more of water during the winter and spring months of the year. Even if not submerged occasionally, bulbs must have ample supplies of moisture when in full growth, and at Rush, as in the canal-intersected Dutch bulb farms or gardens, water is found lying at a foot or two beneath the surface at all seasons of the year, rising higher in winter, and lying at a lower depth in summer, but still always there. When this is so in soils lying low down near to the sea or river levels, bulbs obtain a natural supply. The upper surface of porous or sandy soils may look and is very dry, but an inch or two below the surface where the bulbs are, is constantly moist, and the roots of the bulbs obtain ample nutriment, as well as fresh pure air and sunshine energy, and it is under such conditions that the best and soundest of bulbs and flower roots generally are grown in Ireland as well as elsewhere.

In Holland bulb culture has been an hereditary pursuit or calling for the past three centuries at least, and it is a curious historical coincidence that bulb-growing and printing should both have been started in Holland at about the same time. The art or craft of bulb culture, with all its technical details, has been a growth, and the bulb-growing son has succeeded the bulb-growing father from generation to generation, and, like viticulture in France, or the pruning of old Olive trees in Lombardy, the mysteries and methods are, so to speak, deep-seated in both heart and brain, or, as

one might well say they are, "in the blood." Now, as is the case with all new cultures or fresh experiments, it will take some time to get bulb-growing "into the blood" generally of the average or ordinary Irish farmer or market gardener; still in some favourable cases it is now in progress, and even in rare cases is actually being done. We may safely assert that no finer or better bulbs of Narcissus, or Daffodils, Tulips, Snowdrops, Crocus, Iris, or even of Gladiolus, and Holland's own speciality, the Hyacinth, are produced anywhere than are the best of those grown on Irish soil. So far we have not grown the quantities grown by the Dutch in Holland, or even as many as are now being grown in Surrey, in Cornwall, and the Scilly Islands, or in Lincolnshire, where soil and climate resemble those of Holland in many ways. Still, the quality and healthy character of the best of Irish grown bulbs is past all denial.

An Irish lady gardener—viz., Miss F. W. Currey, of Warren Gardens, Lismore, county Waterford, has taken prizes for collections of Narcissi at the Royal Horticultural Society's and other large English flower shows and exhibitions, and her bulbs command the best prices because their quality is so fine, and this in spite of isolation, as it were, from the world's great centres and markets. In the South of Ireland the earlier and well-ripened kinds of Narcissus roots were being dug as early as June 9, and they are this season of quite exceptional quality, which will, no doubt, be welcome news to those who purchase them. At the Temple Show, held in London in May last, one of the finest, choicest, and most beautiful displays of Tulips were those from Ireland, these being exhibited by Messrs. Hogg and Robertson from their "Holland in Ireland" bulb grounds at Rush, county Dublin, and another came from Mr. W. Baylor Hartland, of Cork, who grows his flowers and bulbs at Ard Cairn, within sound of Father Prout's "Bells of Shandon," and fed, no doubt, by "the Pleasant Waters of the River Lee."

Although there is no kind of Narcissus really wild in, or native of Ireland, these flowers of the poets have long ago been introduced to gardens, and have become naturalised in and around many old and derelict country places "where once a garden smiled," as Goldsmith so charmingly puts it in his "Deserted Village." Another poet, Wordsworth, in describing the wild Lent Lily of England, struck a true cultural note when he wrote of it as growing "beside the lake, beneath the trees," since it enjoys moisture, shelter, and that half-shade afforded by the branches of deciduous trees when lightly clad in their earliest springtide verdure. Shelter from very high, very dry, and rough winds or gales, so common in March, all Narcissus, Tulips, and other choice bulbs must have, or their leaves and flowers are alike disfigured or destroyed. There are pet spots around the south and south-western shores of Erin as mild and nearly as sunny as are the Isles of Scilly; but in Ireland, as in Tresco or St. Mary's, there are often furious gales, which soon ruin a good crop of flowers, and injure the bulbs by damaging the available leaf area at a critical period in its growth and action on the bulb below. Even at Rush, in county Dublin, where Messrs. Hogg and Robertson established a bulb farm in 1895, the wind is terrible at times, as it sweeps across the sandy plateau, either from the north-east, or when spring gales tear furiously across the little fields or gardens from the sea. Each little plot is fortified by sloping earth embankments or low mud walls, and hedges of the oval-leaved Privet and other hardy shrubs are used in addition to or in combination with the earth-banks, so as to break or filter the wind, and so far screen flower buds and leaves from injury. The land that has been under trial at Rush for six or seven years consists of small, irregular plots, and altogether comprises some twenty-one acres. The kinds of bulbs here grown largely consist of Narcissus, Tulips, Iris, Ixias, and Sparaxis, Gladiolus, Anemone, and Ranunculus. Of these now popular flowers the finest of varieties and new seedlings are grown with every success.

About six acres are devoted to Narcissus, and the collection embraces about 300 distinct kinds. The collection includes many new varieties of great beauty and interest—e.g., Lady Margaret Boscawen, Brigadier, White Wings, White Lady, Countess Cadogan, Lady Arnott, Mrs. H. D. Betteridge, Countess Mayo, Cloncurry, Flambeau, Flamingo, &c. About seven acres are devoted to the culture of the Tulip in its many different forms and phases. The collection embraces early single and early double varieties, Parrot, Tulip, May Flowering, Cottage Garden, Darwin,

Rembrandt, and English florist sorts; there are also a very complete collection of *Tulipa* species. The collection of early single and double sorts includes all well-known varieties. There are about five acres under miscellaneous bulbs, and all the leading sorts of *Iris*, English and Spanish, *Ixias*, *Gladioli*, early flowering sorts, *Gandavensis*, *Childsii*, *Nanceanus*, and *Lemoine's* hybrids, *Anemones*, *Ranunculus*, &c., are grown. The above lists give our readers some definite notion of the importance of this industry; and as affording a bird's-eye view of the site and local conditions and surroundings of this "Holland in Ireland."

A great deal of public interest is now being taken in the bulb lands of Rush, and in March, April, or in early May you might have seen many visitors eagerly scanning and admiring the strong and healthy growth, and, of course, the flowers. It is no wonder that florists and amateurs, as well as the general public, do this, for it is a lovely sight when *Narcissi* give masses of white or glowing yellow, or when *Tulips* paint the sandy plots with purple and white, or crimson and gold, or with parti-coloured patches that call to mind gorgeous Persian rugs or prayer carpets, as the flowers, countless in their numbers, scintillate and sparkle in the sun. It is really and truly something more than a mere nursery ground, and visitors enjoy what is really a noble flower show in the open air. Next season we hear facilities in the shape of admission tickets for one day each week are to be provided, for which privilege, of course, the usual personal applications must be made. We do not know whether the Land Commission, or even the Agricultural and Technical Education Department, have ever thought it worth their while to send their experts or advisers to see the bulb grounds at Rush. There, however, in a quiet and comparatively out-of-the-way place, may be seen one of the most remarkable and practical object lessons on profitable land culture to be found in Ireland at the present time. It is the old story of Columbus and the egg. Mr. James Robertson has shown us how to grow bulbs extensively, intensively, and profitably on Irish soil, and now, of course, everyone will be wondering why a thing apparently so simple should not have been attempted near Dublin before.—(MR. BURBIDGE, IN "THE IRISH TIMES.")

Culture of Cob Nuts and Filberts.

It might be worth while in these days, when it is a difficult matter to know what to plant for profit, to try the experiment of planting largely the above class of fruiting trees. We have on various occasions had a glut of different kinds of fruit, sometimes Plums, Apples, Cherries, or even Gooseberries, but, to my knowledge, never a glut of Cob Nuts; yet at the present price of 9d. per pound one would naturally suppose the cultivating of this class of Nut should have more attention. Take, for instance, an acre of trees, which, if they have been properly cultivated, could produce from a ton to a ton and a half, and possibly more. This, then, works out (say a ton rate), at 9d. per pound, £84 per acre. Now, considering there is not much expense required after the trees are planted, this would be very satisfactory. One good point in growing Nuts is, they will keep some time in good condition, and can be sent any distance without injury. That is why we get a fair quantity sometimes from the South of Europe.

Soil and Distance for Planting.

The trees succeed best when planted on stony ground, plenty of which is to be found in South Oxford, Berks, Bucks, and Hants. If planted on ground too good, or on ground which contains much moisture, they will make too much wood, and the crops will be small. Give the trees a stony ground and a south aspect, and there will be little chance of failure. The trees are to be had with single stems and as bushes. The former kind of tree is much the best to plant, at the same time more expensive to purchase. Bush trees may be planted 8ft apart, while those known as half-standards require to be planted 10ft apart. In planting a large piece of ground a little more distance than this should be allowed in two or three places, to allow a small cart to pass through, which will be found convenient at times. The best time to plant is in November and December, when weather permits.

Pruning; and Watching the Crop.

After the trees are established, and growing freely, a little pruning is required every year, which is best done during February, choosing mild weather for the work. It is important to keep the head of the tree from becoming too crowded with wood. Coarse wood is not good for producing Nuts, but, as a rule, the slender, twiggy pieces are the ones to encourage, and where the Nuts are to be found. Like other kinds of fruit, the Nut is influenced by the weather, so that when the trees are in bloom, if the weather is genial a good set will result; also, a dry summer suits them better than a wet one. It must not be forgotten that quantities of Nuts sometimes disappear with lightning rapidity, and a watch for the time must be kept, as squirrels, rats, mice, and rooks will do their best to gather in a store, to say nothing of people with long fingers, all of whom enjoy Nut picking.—A. J. LONG.

Table Plants.

In many establishments where table decoration is practised, both large and small plants are needed. In speaking of table plants many people would conclude that a plant in a 5in. pot was understood. I am now only treating of plants grown in 3in pots, and ranging from 4in to 9in in height. I have used such plants in gold and silver decanter stands, and have seen them used in enamelled earthenware pots; and those who have such decorations to carry out need a supply of plants suitably grown for the purpose. It is easy in the summer, perhaps, to have more variety, but when the decorations are done in winter and spring a little forethought is required. *Codiaeum* (*Croton*), *Heathi elegans* and *C. Johannis* are my favourites amongst narrow-leaved varieties. They have a considerable deal more of the yellow colour than green in their leaves, which makes them such desirable varieties. Some two dozen or more of each variety under my observation were struck from cuttings in June, and are now fine plants, 9in high; and they will retain their beauty through the winter if carefully watered and given occasional stimulants, and also kept at a minimum temperature of 60deg.

Panax Victorice, struck at the same time from tops, are now fine feathery plants in 3in pots, from 6in to 9in in height. They are grown under the same conditions as the *Codiaeums*, with the exception that they are shaded from strong sun.

Dracena Sanderiana, also struck from tops in June, and grown under the same treatment as the *Panax*, with shade, are now fine useful plants. *Godseffiana*, struck at the same time, and grown under the same conditions, with shade, are elegant; while *Aralia Veitchi* and *A. V. gracillima* were grafted upon small plants of *Aralia reticulata* and *A. Guilfoylei*, which had been struck from cuttings in the early spring. The head of the stock is taken off, leaving about an inch or so of stem. A cleft is then made with a sharp knife, the scion being cut into a wedge shape by removing a thin slice on each side, whence it is inserted into the cleft of the stock, both being securely bound with raffia, placed in a close propagating house, or case; and they soon unite. Some nice small plants under my notice were so grafted in July.

Small offsets of *Pandanus Veitchi*, taken when quite small, and well variegated, were also struck. When left too long they never assume the same graceful curve as when taken quite small. It is not necessary to place them in a propagating frame. They make chaste table plants.

Small young plants of *Rex Begonias* also furnish nice table plants. Mature leaves, taken during the summer, and laid on moist shady stages on gravel or coal ashes, and partly covered with the same. They soon produce plenty of plants if the leaves have their veins cut in several places. When the small plants from the breaks in the veins have developed somewhat, can be potted into small pots. *Dieffenbachia Bausei*, raised in spring from eyes by cutting up an old stem into pieces of inch or so in length, each with an eye, and these put into pots or pans, just covering them with light sandy soil, furnish useful stock. I like to cover the "sets," with a piece of glass, and place the pots in the propagating house.—F. STREET.



Cypripedium X Helena.

This is one of Mr. Robert Tunstill's hybrids, and, as will be seen from Mr. Shayler's sketch of it, the novelty is distinct and very beautiful. One of the parents (*C. bellatulum*) has exercised a marked influence in the form of this new variety; the other parent, probably the male, was *C. insigne* Chantini. The upper sepal and broad petals are cream-white, splendidly marked with purple; the lip is of a waxy vaseline tinge, covered with a shade of purple. An Award of Merit was accorded to Mr. Tunstill (of Monkholme, Burnley; gardener, Mr. Balmforth) by the Royal Horticultural Society on Tuesday November 26.

The Week's Cultural Notes.

When the deciduous *Calanthes* have finished flowering there is nothing to prevent their being repotted at once. The roots are dead and of no more use to the plant, excepting that a few may be cut off at an inch or two in length and left to hold the pseudo-bulbs in position after potting. First of all, turn them out of the pots and divide the old from the new bulbs. All the latter will, of course, be repotted in the usual way, but the former may be reserved and laid on boxes or pots of loose material. Any that push new growths—and many will if they are otherwise healthy—may be potted, and if they do not flower the first year they will make flowering plants for another season.

The compost for these useful Orchids may consist of loam fibre and peat in equal proportions, with a little chopped sphagnum moss added and plenty of finely broken crocks. A little very coarse silver sand may do no harm; but the fine sand often used for potting is worse than useless, clogging up the compost and drainage instead of keeping it open, and preventing that free access of air that is so necessary to the roots of all Orchids, no matter whether terrestrial or epiphytal. The drainage should be carefully laid, and should fill not less than half the depth of the pot.

The compost line should be just above the base of the bulbs; if deeply buried the young shoots may never see daylight. After potting no water must be given, but the pots should be stood on a light dry shelf in a warm house until young growth starts. The number of plants in a pot may vary from 1 in a 3in pot to 4 or 5 in a 9in. Some growers add manure to the compost, and this is, of course, an incentive to strong growth; but strong growth does not always mean a large number of flowers, and a moderately large and well-ripened pseudo-bulb usually produces much finer-coloured flowers than an exceptionally large one.

Dendrochilums should by now have matured their bulbs, and, although they are heat and moisture-loving plants, a steady up of the atmosphere and a slight drop in the temperature will be of advantage. Most of the *Dendrobiums* will be at rest, but any, such as *D. chrysanthum*, and in some cases *D. album*, that are making new growth should be accommodated with a suitable temperature. There is no need to excite them unduly, but the growth must be kept on the move. If checked now but few flowers will be produced, and these are often mis-shapen and abortive, and the plants grow again unseasonably.—H. R. R.

Cypripediums at Cheltenham.

Those who cultivate a good selection of Orchids in fairly large numbers are never without a few or many attractive species in flower; but without the aid of *Cypripediums* the display during the late autumn and winter months would, to say the least, be disappointing. Not only are new and very valuable additions being made every year to the lists of *Cypripedium* species and forms available for the enthusiast who is both ready and willing to pay £200 and upwards for tiny plants that could be sent by letter-post, but abundance of good and, to the inexperienced eye, nearly as beautiful, varieties, can be had at a comparatively small outlay.

When grown and flowered in masses, or, as seen at Mr. Cypher's Queen's Road Nurseries, Cheltenham, *Cypripediums*—without quite rivalling *Cattleyas* for effect—are yet most attractive, and the more they are examined the more they gain in favour with the observer. When out of flower, *Cypripediums* are far from being unsightly, in this respect comparing most favourably with most other Orchids. Nor are they difficult to cultivate and flower, while the duration of the majority of the blooms is almost phenomenal, the individual flowers of the *insigne* group, for instance, frequently retaining their freshness for fully three months.

What apparently suits the majority of species is a house sheltered from cold winds and not unduly exposed to the sun. This admits of a genial heat, and a slightly moist atmosphere being maintained without the expenditure of much fire heat or

the necessity for frequently damping down to counteract the otherwise injurious effects of excessive fire heat and currents of dry cold air. At Mr. Cypher's the best display of new and rare species is to be found at the present time in the inside compartment of a moderately high span-roofed house, this having a blank wall at the cold end. Here there is a grand bank of well-grown *Cypripedium*, arranged on the central stagings with more on the benches around.

Conspicuous among these are a group of yellow forms of *C. insigne*, the truly beautiful and most valuable *C. i. Sanderae* being represented by eight expanded blooms, these standing out pre-eminently beautiful. Other and less expensive, yet pleasing, yellow *insignes* were Ball, Dorothy, Ethel, Ernesti, Statteriana, and aurea marginata. This by no means exhausts the *insigne* group; such grand forms as Harefield Hall, magnifica, montanum, montanum aureum, punctatum violaceum, and numerous more or less pleasing variations being represented.

The *Leeanum* group is among the most beautiful of the family, this in some respects eclipsing the *insigne* section, quite the smallest plants producing large, handsome flowers, supported by tall wiry stems. Very fine, indeed, is the display of the *Leeanum* varieties, and healthier, better-grown plants could not well be found. The most attractive were giganteum, aureum, aureum giganteum, Cypheri, superbum, magnificum, and the chaste and beautiful virginale. Other species flowering freely and of great merit were *C. Pitcherianum* (Williams' variety), several fine forms of *C. callosum*, the beautiful *C. Fascinator*, *C. nitens*, *C. Harrissianum* superbum, *C. Leonie*, *C. Arthurianum* (one plant in a large batch of the latter having eight blooms expanded), *C. Charles Canham* (with the same number of blooms), and various others.

In addition to these choicer species and varieties, Messrs. Cypher also cultivate many hundred plants of the ordinary *C. insigne*, principally for affording cut flowers at Christmas or a little later, and a grand display these make, too. After they have made their new growth in the spring these large batches are transferred to frames and shallow pits for the summer, moving them into houses early in September, and under this treatment they flower abundantly.

The value of this *Cypripedium* for conservatory, greenhouse, and room decoration about midwinter is lost sight of in too many private gardens.

In connection with this visit of mine to Cypher's Nurseries, I should like also to mention the masses of *Laelia anceps*, which would soon be at their best, *L. anceps alba* promising to have hundreds of lovely flowers open for Christmas, while *Vanda cœrulea*, *Dendrobium Ethel* (named after the late Mr. Cypher's grand-daughter), and the "tail end" of a large collection of *Dendrobium Phalaenopsis Schröderiana* also attracted attention.—W. I.

Forcing Vegetables.

Asparagus.

The best method of forcing Asparagus is to place the roots on a hotbed in a frame, employing those not less than three years old. A plentiful supply of roots should be at hand, as they are no further use after forcing. A mixture of manure and leaves may be thrown together and allowed to heat, turning several times. From a bed of this, in a brick frame of good depth or build, a dung bed 4ft high at back and 3ft in front, and 1ft wider than frame which is available to place upon it.

Place the materials together moderately firm. When the heat, after rising, has subsided to 80deg, cover the bed with 3in of soil, and place the three-year-old roots of Asparagus thickly upon it, and cover to the depth of 5in. The soil must be kept moist and the frame closed. An open hotbed, with a frame on top, will lose its heat quickly, hence fresh linings of manure will be requisite so as to maintain a temperature of 65deg. In the absence of suitable facilities for early forcing in frames roots can be induced to push growth in boxes placed in a forcing house in a temperature of 65deg to 70deg.

Seakale.

Successional supplies of Seakale roots should be taken up and prepared; strong thick samples with bold crowns are always suitable for forcing. When lifting them, cut off the slender whip-like roots, as they are no benefit in forcing, but form admirable materials for fresh stock, cutting them into lengths of 6in, with a level top and a sloping base. Plunge in sand or soil until spring, when plant. The thick forcing roots must be placed in deep pots or boxes, and surrounded with soil to the crowns. Cover closely with inverted pots or boxes, as light must be totally excluded. Keep the soil moist. A temperature of 60deg must be afforded.—D. S.

A Horticultural Class.

Quite recently there have sprung up in various parts of the country elaborate and splendidly equipped Horticultural Training Schools and Colleges—places where gardening, theoretical and practical, can be studied in all its branches, and with every advantage. But money for this purpose was not always so plentifully forthcoming, and some of the establishments and gardens where horticultural instruction is now imparted, replete, as they are, with every convenience, had rather small beginnings. Of such value, and so successful has the work initiated by some of these classes and courses, of lectures proved, that pupils of a few years ago look with surprise as well as pleasure at the way in which they have since prospered and developed.

It is only six or seven years since that the writer had the opportunity of attending one of these classes, organised mainly as an experiment—an experiment against the success of which there were some drawbacks, but the results of which, on the whole, proved so satisfactory that it has since been extended into one of the best systems of horticultural training in the country. The students were thoroughly representative of the gardening youth of the country; intelligent young fellows engaged in nurseries or private gardens, with some knowledge of the practical part of their work, and most of them willing and eager to learn something of the scientific side also—of the why and wherefore of the various operations that they knew how to perform. With the ablest of instructors, a well equipped laboratory, and everything necessary for botanical and entomological study, there was the finest opportunities for doing this, and if the conveniences for practical work were somewhat limited, they were certainly made the best of.

It would be no exaggeration to say that to some of those who attended that class, the first few days' work was a revelation. The plant, hitherto looked on as a mere thing to be cultivated by treating in a certain way, took to itself a new and previously unknown interest. We learnt that it was not just a solid body of leaves, stalk, and root, that somehow, we knew not how or why, managed to grow and bear fruit and seed, but a thing that lived and fed, had an appetite, and possessed its likes and dislikes, and that its parts were as wonderful and diversified as those of our own bodies, till it became something to be respected, a thing of dignity, something to be handled carefully and with discretion, and that ought almost to be stood in awe of.

What fresh wonders were revealed by the use of the lens and the microscope! The faces of some of those students, viewing for the first time the structure of the various tissues, the cells, the circulating sap, the strands of protoplasm and the stomata, would surely have been a study for an artist. Whatever might be forgotten, these wonders of Nature seen through the microscope certainly would not be. With names some of us were not perhaps so successful. Gardeners, as a class, are famed for the number of high-sounding names they can mystify their lay brethren with, but when the "words of learned length and thundering sound" were rolled forth, when it came to wrestling with parenchyma and sclerenchyma, with monocotyledons and dicotyledons, some of us began to feel our hair rising, and when afterwards, in pursuing our studies of insect life, we made acquaintance with the fearsome Lepidoptera, the grim Hymenoptera, and the blood-curdling Coleoptera, not a few gave in in despair. One young fellow, who had had some years in a fruit nursery, felt assured that he had nothing to learn about budding and grafting, but on hearing of the upward and downward flow of sap, of the cortex and the cambium layer, and the oxidation of exposed tissues, he quickly changed his mind.

The chemical laboratory, too, was another field of knowledge opened up for the first time. Here we learnt of the different constituents of soils and manures, which elements were essential and which not, and something of the method of testing and analysing them. It was only with difficulty that we overcame our misgivings with regard to handling the questionable bottles of acids and salts

arranged in front of us, fearful, in spite of assurances to the contrary, of burning holes in our hands, or launching ourselves, laboratory and all, into space; and, indeed, one or two carried home the marks of sulphuric acid on their clothes, whether they retained any knowledge of it in their heads or not. But once fairly set to work, and it was hard to leave it, we would have liked to go on analysing and conducting many more experiments on our own account. As it was, our investigations led to a considerable number of weird and unsavoury odours being let loose, and a small amount of gunpowder—the connection of which with horticultural chemistry was rather obscure—was manufactured; a composition which no amount of coaxing would induce to explode. What a humane thing would war be if only gardeners' gunpowder were used?

The practical part of our gardening work afforded diversion as well as instruction. We were handicapped by the fact that the area of garden to be cultivated was little more than sufficient to afford standing room for all the pupils. It was an experimental garden, its chief feature being a magnificent crop of fine healthy labels, with a Currant bush standing nobly in the centre. But some digging and trenching had to be done, and selecting a portion where the labels were least numerous, we trenched it. Then another gang trenched it, and afterwards a third party, and we concluded that if soil could

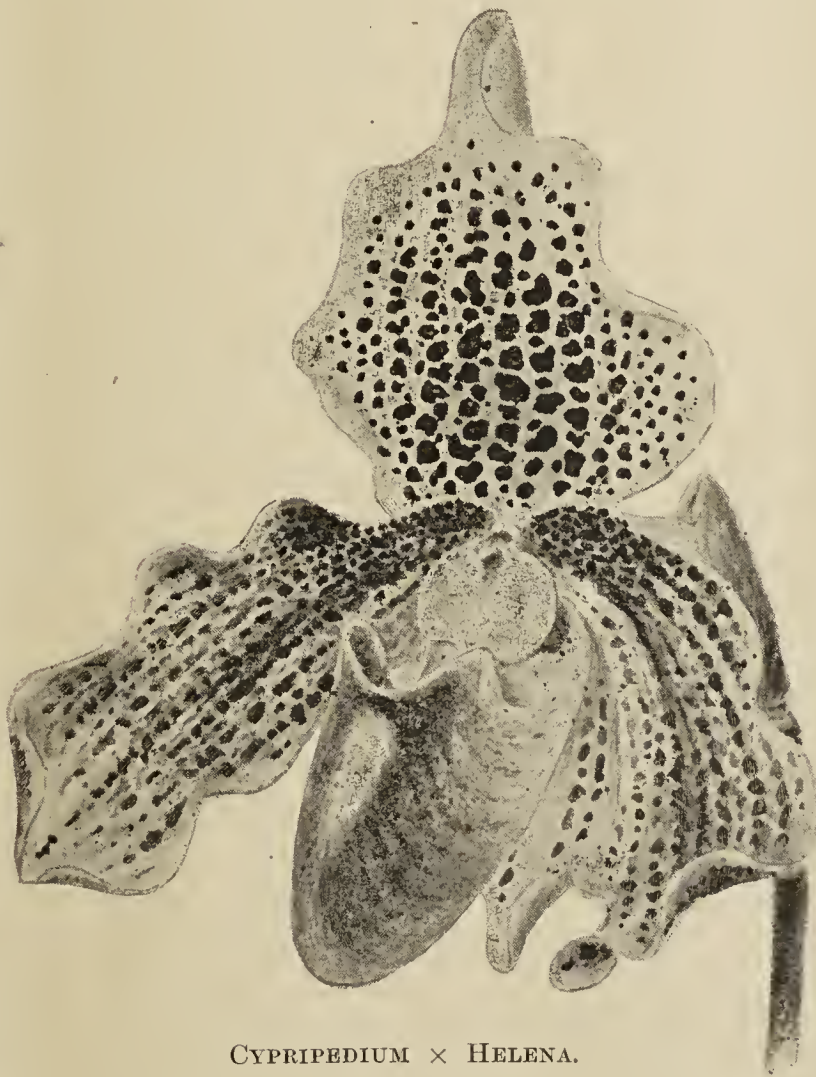
be improved by trenching, that portion ought to grow well nigh anything.

Meanwhile, another student vigorously hoed a plot that did not require hoeing, and another came after him and ameliorated it still further by raking, after which the rakings were carefully put back again. The meagre supply of plants and bulbs on hand were potted and repotted, till they were nearly potted to death, and finally, when we were required to show our skill in staking, we fell like wolves on six unhappy Balsams, that under ordinary circumstances no one would have dreamt of staking, and staked them and unstaked them, and restaked them so many times, than eventually, in protest against this extraordinary treatment, they hung their heads, and refused to stand up except when securely tied.

Then there was the planting lesson, when few plants served for many hands, though I cannot guarantee that the continual transposition gave the plants greater incentive to grow.

There was undoubtedly some amusement as well as a great deal of instruction obtained from that class, but all who attended benefited thereby, and went away with a greater interest in, and a higher conception of their calling than they came with, and the small theoretical garden has now developed into a magnificent place, where everything may be grown

to the best advantage, and it is well worth anybody's while to see.—A. W. D.



CYPRIPEDIUM × HELENA.

Pernettya mucronata.

By planting beds of this plant and its varieties, showy masses of colour may be had all winter, for although the berries are often coloured early in September they will usually hang on the plants until March. As an evergreen shrub alone it is worth growing, for it is of neat appearance. Rising to a height of from 2 to 3 feet it makes a dense bush with small, dark green leaves. As a flowering shrub it has also some claim on our attention, for in late spring it bears a profusion of small Heath-like white blossoms. In the typical plant the fruits are bright red when ripe, but a great variation of colour exists among the varieties, all shades being found between white, rose, and deep red. It is one of the members of the *Erica* family that prefers loam mixed with the peat in which it is planted, and in some gardens it thrives remarkably well in loam alone. When once established and doing well it should be left alone, as undisturbed plants produce by far the best crops of fruit. When beds have been planted a little while it is not desirable to fork between the plants, or the young suckery shoots which travel for a considerable distance under ground will be disturbed. In seasons when a particularly heavy crop of fruit is borne, it is advisable to support the most heavily laden branches with forked sticks.—W. D.



Evergreen Ferns.

It is at this season the beauty of the evergreen Ferns is best appreciated. Not a particle of green gives way to an autumn or winter shade, and the fronds remain fresh and bright through all the snows of winter. I have frequently enjoyed the Christmas Fern, says a writer in "Meehans' Monthly," *Aspidium acrostichoides*, under such conditions. It is plentiful along the rocky banks of the Wissahickon Creek, Fairmount Park, Philadelphia. *Aspidium marginale* is a good evergreen, but the green colour is not so shining.

Notes from the "Eden" Garden in Venice.

Mr. Lee Bacon, through the "Century Magazine," furnishes notes on Venice gardens, and of the Eden Garden he says:—"Where the Roses bloom in greatest profusion is the Eden Garden, on the far side of the Giudecca, stretching away in the direction of the salt marshes, which give out such strange seaweed odours. The English gardener who speaks with a bur and an Italian accent at the same time, told me the property once belonged to a convent. Here the late Empress of Austria was wont to sketch, and here the Italian actress Duse, fortunate in being a welcome guest, spends many mornings wandering up and down its shady walks. One is rarely near enough to see whether it be Alfred de Musset, Dante, or one of the English authors she has in hand; for, as one advances within sight and sound the slight figure is apt to lose itself in the cross paths, though when Henry Bacon was painting his picture of the Virgin among the Lilies he was often aware of the shadow of the noted Italian falling almost on his canvas. These paths are overhung with Grape-vines trained upon trellises, with here and there great *Acanthus* plants, with the wonderful foliated leaves which seem to have been the inspiration and base of four-fifths of the world's decorative designs and carvings. Farther along, hundreds of Lily plants raise their straight stiff stalks, and at a certain time are covered with so many blooms that one is fairly driven from them by the heavy perfume."

Cornus Mas.

Winter is now with us, and the last flowers of the season have disappeared on outside trees and shrubs. With the disappearance of all flowers there soon comes a longing for those of spring, and to many it will be a pleasure to know which is the first they may look for. It is safe to say but few are as early in flower as the *Cornus Mas*, or Cornelian Cherry, as it used to be called. One or two other shrubs run it a pretty close race, the *Daphne Mezereum*, *Lonicera fragrantissima*, *Witch Hazel*, and *Garrya elliptica*, for instance, but usually the *Cornus* leads. The flowers of this shrub are quite small, yellow in colour, and, individually, are not striking; but they are produced numerous along the naked branches of the previous season, in advance of the leaves, so that the whole shrub presents a mass of yellow. It is not as striking in appearance as the *Golden Bell*, but it is the first, and for this reason it cannot be compared with later rivals. An interesting fact in connection with it is that, towards the close of winter little shoots of it cut off and placed in water, indoors, open as nicely as if on the tree. Florists have made use of this fact to force the blossoms ahead of the season, as is sometimes done in the case of *Golden Bell*. Because of its early flowering, the place for a specimen of *Cornus Mas* would be not too far from the house, even if within sight of it, as everyone knows the cheering inspiration a peep at awakening Nature gives in early spring to those who, perhaps, are unable to go outdoors to see it. Referring to this being the first shrub to flower leads one to say that season has very much to do with deciding which shall be first. Some peculiarity will advance some and retard others, and the one first this year may be in the second or third place next. There are certain conditions determining these things which are past discerning by those who do not make a special study of the subject.

Scale on Palms.

It is not advisable to delay cleaning scales from Palms. They are insignificant looking creatures, and it is an easy matter to be unmindful of the damage to a plant they can do in a small space of time. The nature of a scale is not known to everyone. It is an insect covered by a scale protection, and it feeds on the juices of the plant to which it attaches. As its work continues, the vitality of the plant is quickly sapped before one is well aware of it. The increase of these insects is enormous, each female producing hundreds and thousands in a year. Therefore, be watchful and prompt in checking its progress. "It is much better," says "Meehans' Monthly," to spend a few hours cleaning away a few scales from a healthy plant every few days than to spend a whole day on a sickly plant once a month.

Forest Fires.

"To Prevent Forest Fires" is the title of two consecutive articles in a leading American forestry journal. The first one shows that it is impossible to prevent forest fires so long as large masses of dried underbrush are permitted to exist. Forest fires would be impossible if arrangements were made to keep woods clear of this inflammable matter. The next author tells how to prevent forest fires by insisting that all this amount of dead matter must be permitted to remain in order to be the receiver and retainer of the water that feeds the springs. But he fails to tell what becomes of this "receiver and retainer" when the forest fire has burned it out. This argument is in continual use, but it seems strange to have the contention that the best way to prevent a forest fire is to encourage everything that favours it.

Ilex verticillata.

The deciduous Hollies are rarely cultivated in this country outside botanical establishments, though they are quite worthy a place in the shrubbery where bright coloured fruits during the latter months of the year are appreciated. At one time these deciduous Hollies were called *Prinos*, and the one under notice is still known in some places as *P. verticillatus* or *laevigatus*. *I. verticillata* makes a bush 6 feet or so in height, with a similar diameter, and has ovate leaves which vary in size from 2 or 3 inches in length by half an inch in width to almost double that size. The fruit of the type is about the size of a small pea, coral red, and hangs on the branches for a considerable time after the leaves have fallen. In addition to the type there is a form with yellow berries which is also a desirable plant. Regarding soil, it is not fastidious, anything of a loamy nature appearing to suit it. Its native country is North America, and there it is often spoken of as the "Winter Berry."—W. D., Kew.

English Walnuts.

That the English Walnut does very well in Connecticut, America, at least, seems not well known. Last spring a friend came to me, writes Mr. Meehan, to know if he could plant a tree of it with any chance of its proving hardy. I took him to one in sight of where we stood, a large tree 40ft high, and with a spread of as many feet, and which had then a large crop of nuts on it just forming. His attention was called to this tree being but one of a dozen within a radius of a mile, all very large specimens. The man was really astonished, as he had been informed that the tree was not hardy in the vicinity. Nurserymen usually rely on nuts from Europe for the raising of seedlings, keeping the nuts in slightly damp sand all winter, and sowing them in spring. The seedlings from these imported nuts often lose their tops when quite small; but, in common with some other trees not over-hardy, this freezing back does not occur after a few years have passed. The nurserymen may also obtain trees from England. The Norway Maple is apt to behave in a similar way, and nurserymen find that both the seedlings of this and the Walnut make straighter plants if undisturbed in the seed beds until they are from 4ft to 6ft in height. To have a hardier race of this Walnut, seeds should be secured from these home-growing trees. I think there is no question that the seedlings from them would be hardier than those from Italian or French seeds. It is not generally known that they are having trouble with their Walnut trees in California, a disease called bacteriosis attacking the twigs and fruit. It appears in black, sunken spots on the hulls of the Walnuts, spreads, and reduces the whole to a black rotten mass. It is causing serious trouble to the Walnut growers of the State; whole orchards are suffering, and have to be sprayed with Bordeaux mixture.



Chrysanthemums for Christmas.

In these days of huge blooms and exhibitions I fear many gardeners lose sight altogether of the late varieties for decorative purposes until the festive season arrives, and then they suddenly find that there is little in the conservatory or for the decoration of rooms except plants of a smaller type, such as *Ericas*, *Epacrises*, *Primulas*, and so on. The glories of November have departed, and left an awkward gap that they find it difficult to fill at a season when so much is required, and many, no doubt, mentally resolve to have matters arranged a little better next year; but, alas! their resolutions rarely advance to tangible form. They cannot forget the huge blooms seen at the last exhibitions, nor the new varieties, which, by the way, are all large "monstrous beauties," warranted to flower the second week in November, if the pinching and bud-securing so accurately described in our catalogues be carried out, that the Christmas decorative varieties are all too readily forgotten, and I may say in passing that the specialists' catalogues do not make a strong point of these varieties, except to explain that by doing this, that, and the other you can obtain large blooms for show purposes.

Many and many a conservatory and greenhouse at the present time may contain a few straggling plants of a nondescript character, those, for instance, that refused for some reason or other to "come to time," but as to a display, that is beside the question. Now, where must we turn for information as to the best varieties for this purpose? Why to the market growers, the men who are compelled to keep up a constant supply of Chrysanthemums from September to January—yes, and much later. Mind you, I do not take this as a virtue to the market men—Oh, no!—for with them it becomes a matter of bread and butter; but I do say they are the class to whom we must look for information as to the best varieties, for their houses just now are filled with thousands of all the best late-flowering varieties, and it is from this source that I now take up this subject. In the first ease, to make a good decorative plant we must have a large full bush—dwarf growing, if possible—but at the same time there are a few good varieties that are tall growing, but are so useful that they cannot be ignored. Then, good foliage is also essential, but this is a mere matter of detail. Commencing with the white varieties, *L. Canning* is known as one of the best, dwarf in habit, and, if well grown, really good, but one often sees it inferior or poor. I have heard it stated that this variety is showing signs of degeneracy, but I think it is merely a matter of culture.

Mme. Thérèse Panckoucke—a fine white that has come well to the front of late years, and bids fair to stop there—is a capital Christmas variety, but rather tall; *Mme. Ad. Chatin*, although tinged with colour while opening, becomes pure white afterwards. A good dwarf grower, *Princess Victoria*, is a splendid variety, creamy white, changing to pure white after it has developed; a good sort to retain its foliage. Of the newer varieties, *Tuxwood White* bids fair to become a general favourite. I have not grown it myself, but a neighbour has a grand batch for the market. *Mrs. J. C. Neville*, grown to terminal buds, I feel convinced will also make a valuable addition; as will also *Homme d'Helle*, a Continental variety I am growing for the first time. This bids fair to be a good one.

Taking the yellow varieties next, we come to the popular *W. H. Lincoln*, a veritable sheet anchor, for it can be had in flower from September to the end of December, having a perfect habit, good constitution, and lasting properties. It is invaluable to everyone requiring cut flowers. Query: Why does *Lincoln* refuse to sport? A white, bronze, or pink would be a godsend. *W. H. Rieman* is also a good yellow, while *Yellow Princess Victoria* furnishes us with a good pale yellow. The old *Golden Gate* is in full beauty just now, and deserves a place in all late flowering collections. *King of Plumes* must not be overlooked, for the cut flowers are so light and graceful for vase decoration.

In pinks the selection grows beautifully and sadly less. *Framfield Pink*, if grown as coldly as possible, will fill the gap, but it soon loses colour and becomes washy. *Mme. A. Rousseau* is a capital variety, and should be in all late collections. *Mrs. Barkley*, though hardly a pink, answers the purpose well, and the terminal buds open for the festive season. *Belle des Gordes*, a hirsute variety, though pale at this season, makes a pleasing shade of pink.

In the bronze section we include *Lord Brooke*, *Geo. Seward*, though there is little true bronze in it; *Matthew Hodgson*, a crimson brown, grand for giving a little warm tone to the col-

lection: *Master H. Tucker*, a rich bronze, but rather tall; *Julia Scaramanga*, a fine bronze, but a sky scraper; while *Mrs. E. W. Clarke*, a deep purple is indispensable, and *W. H. Whitehouse*, I believe, will make a good variety for this purpose. I have a number that will not flower until January is well advanced. *Dora Herxheimer*, will also make a good amaranth variety for late work. This list might be considerably extended, but I have mentioned enough for a good display. I am taking it as an axiom that all will be grown to terminal buds.—AN OLD CONTRIBUTOR.

Hints on Propagating.

Growers of every grade now begin to take an active interest in procuring and inserting cuttings for another season. The energies of the old plants, hitherto confined to the production of the flowers, are now expended in the process of starting and throwing up from the base the sucker-like growths, which every grower likes to see, though it is not every variety which is free in this respect. Some, perhaps constitutionally weak, require considerable coaxing to induce a free growth of suckers, and it is found necessary to shake out the stools and pot in some fresh compost in a smaller pot, affording a little heat, a moist atmosphere, and a daily whiff with the syringe to induce fresh root action and consequent new growth. Others, not too vigorous in the production of suckers from around the stem, produce them readily from the woody stems left above the soil on cutting down the plants.

The relative value of these growths for furnishing cuttings is a matter of importance. Of the two, the sucker growths are to be preferred; but, rather than lose a variety altogether, insert stem cuttings, and grow them on until better are procurable. The preference for sucker cuttings lies in the fact that they invariably possess a clean central growth, which will continue and make a good plant, while stem cuttings often, not always, show a flower-bud in the centre, such cuttings not being supposed to result in good plants. If they must be grown the flower-buds should be persistently rubbed out. To be brief, however, on this point, I advise that healthy, short-jointed sucker growths be obtained, if possible.

Some of these may be secured with roots, but there is no apparent advantage in having such, except that there is less chance of losing them. Cuttings that have new roots to form always seem to grow away better when once established. Good cuttings readily strike root, if carefully managed. Obtain them about 3in long, and cut level just below a joint where the stem is green rather than white, removing a few of the bottom leaves. The pots for single cuttings may be the 2½in size. Where several cuttings are placed round the edge use the 3in or 3½in pots—dry, clean, and moderately drained. The propagating compost may be equal parts of loam and leaf soil and sand. Fill the pots firmly and surface with sand. When inserting the cuttings see that the base of each touches the bottom of the hole made for it. Close the compost well round to make all firm. Level, and give a gentle watering.

The next stage is placing the pots in such position best suited for the cuttings to strike root. Too much heat will spoil them; but they do not resent a little, which assists in the early formation of roots and maintains the cuttings fresh. Stand the pots on a moist base in a small frame or under handlights, at first keeping the covering close, but wipe off the deposition of moisture on the glass every morning. Only shade to prevent flagging. Immediately roots form admit air daily, increasing the amount. But little water should be needed until the rooting is active and moisture from the soil more quickly absorbed. When the cuttings have become well inured to full exposure to the air of the house in which the cutting frames are placed transfer the pots containing them to an airy shelf.

Carefully attend to the requirements of the plants as regards moisture, and in a short time they will be ready for potting on, or dividing into single specimens. In every ease cuttings may not be ready to insert; but as the season for propagation extends for the next three months there will be time to secure those from even backward plants. For the majority of Japanese and incurved varieties January is an excellent month for propagation. February does well for the early-flowering varieties, and also for pompons and singles.

Propagation can be effected more quickly in March, and good plants result if the cuttings, after rooted, are not allowed to become pot-bound. Every chance should be given to the large-flowering exhibition varieties by propagating early, so as to give the plants a long season of growth. It must, however, be uninterrupted by not allowing them to become pot-bound at any stage.

Dwarf and bushy specimens are secured by growing on early propagated plants strongly, and stopping them several times to multiply the number of growths; also by growing the plants strongly on a single stem until May or June, then cutting them boldly back to 6in, 8in, or 12in. The tops of these may then be propagated and grown as single-stemmed dwarf plants bearing a single bloom.—E. D. S.

Mr. S. Arnott and his Flowers.

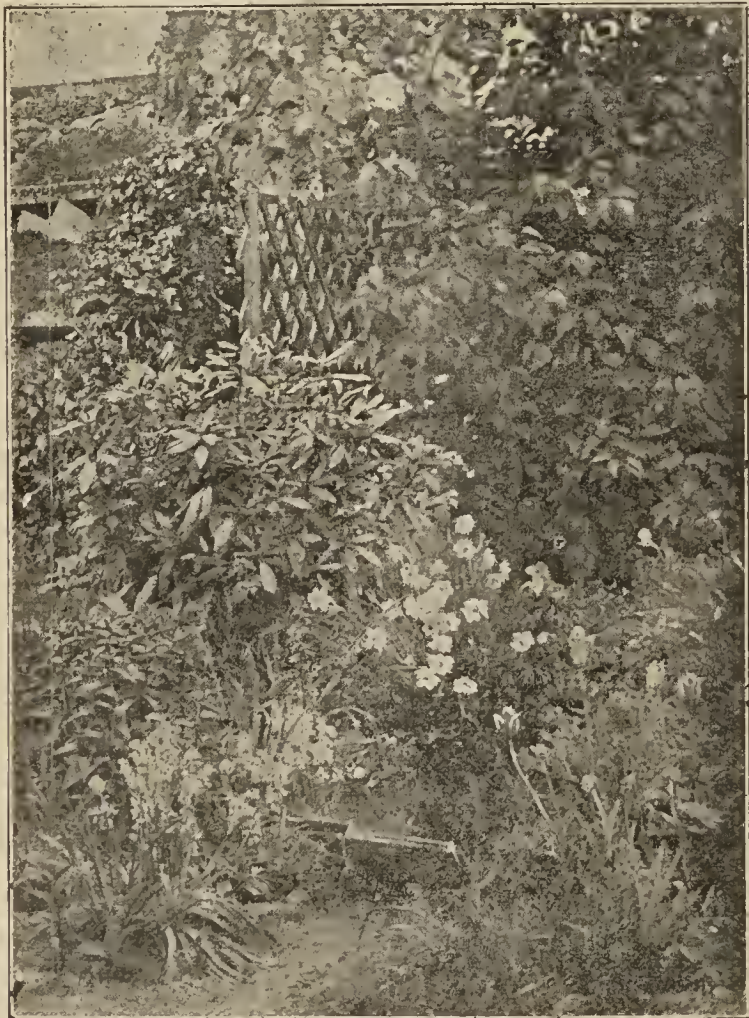
Happily, no words of introduction between reader and subject are necessary in the case now before us. For twelve years past we and our readers have delighted in the charmingly-written articles, chiefly on flowers of the hardy plant garden, that have appeared in the pages of "Our Journal," from the facile pen of Mr. Arnott. His is the record of one, consistent in his love to a special section of flowers, and he pursues the vein of his choice seemingly with ever-increasing ardour and single-heartedness. So warm is his affection for the hardy flowers, and also so wide and thorough is his knowledge of them and experience in their cultural needs, that his writings, while eminently fresh and entertaining, are at the same time essentially practical. Recently he has become a book-author, the "Book of Bulbs," of which we give a short review on page 559.

Although not a professional gardener, Mr. Arnott manages the flower department of his beautiful garden at Carsethorn, near Dumfries, almost without assistance. From his maternal parent he inherited, or acquired, the love of flowers he possesses.

Born in Dumfries—a famous old Scottish town—in the year 1852, his life has been spent within hail of the Solway Firth. He was engaged in business, but retired in 1884 to the village of Carsethorn, on account of his health. The open-air pursuit of gardening has been of physical benefit to Mr. Arnott, and from a small beginning—from having a limited collection—his plants and his love for, and interest in them, have grown to the extent that this Carsethorn garden and its owner are both conspicuous in the horticultural world. Mr. Arnott is a recognised authority on hardy plants, and his garden is a repository of the best border and Alpine flowers, including the most recent novelties.

The Royal Caledonian Horticultural Society, founded in 1809, four years after the Royal Horticultural of London, claims him on its scientific committee. He is also a Fellow of the R.H.S. Besides these connections Mr. Arnott is an acting director of the Dumfriesshire and Galloway Horticultural Society, acting also as joint secretary in promoting the annual Kirkbean and District Flower Show. In the higher public matters Mr. Arnott occupies the honoured position of a Justice of the Peace for Kirkcudbrightshire, is Chairman of Kirkbean Parish Council, and furthermore takes an active part in several local institutions.

We refer with satisfaction to the fact that Mr. Arnott's first contribution to horticultural literature appeared in "Garden Work," now incorporated with the *Journal of Horticulture*. This was in the latter half of the year 1887, under the title of "Notes from a Scottish Seaside Garden." The first article for the



GROUP OF SQUILLS, RHODODENDRONS, AND POET'S NARCISS.



GROUP OF OLEARIA STELLATA AND OTHER SHRUBS.

Journal, on "Colchicums," appeared in 1889, and we trust the same genial mind may long be able to continue the good work he is engaged in. The following letter tells to us the extent of Mr. Arnott's love for the flowers:—

The Garden at Carsethorn.

"The Editor has asked me to give him an article about 'my floral loves.' Little, I fear, does he know the magnitude of the task he has set before me, or the infliction it would entail upon the readers of the Journal were I to comply literally with his request. My tastes in the way of flowers are too broad to be confined to hardy flowers alone, and a confession of my floral likings would be a surprise indeed, seeing that I like to see good flowers, whether they grow in the open ground or require a frame, a greenhouse, or a stove. However, I presume that it is meant that I should say a little about my special favourites, which are the flowers of the border, the rockery, and the wild garden. Even this task is a big one, for it embraces the flowers which usher in the year, those which keep up the succession, and those which come in the dreariest months of November and December. These flowers have been life-long favourites, and some, such as the Hepaticas, the Pinks, the Carnations, the Larkspurs, and others, almost without number, are associated with my earliest memories, as they were grown in my mother's garden as far back as I can remember.

"Although native of a town, it was a country one, and we were hardly ever without a garden which had in it many of the hardy flowers known at that period, and one can yet recollect the admiration felt for their blossoms and the interest with which one looked for their appearing. As to what particular flower I care most for, I cannot venture to tell. I like the Snowdrop, which comes so early in the year, yet I can admire as much its associate, the Crocus; or the Daffodil; or the Lily, or the Iris; or many more too numerous to detail. There would need to be a sad thinning out of many 'dear charmers' before one could select even a dozen of floral loves and say that these were the dearest of all. My only regret is that my garden is too small to permit me to grow all the plants I should like, and that latterly I have had to part with some of my more familiar and less-appreciated plants to make room for newer claimants for one's admiration. Yet old favourites are retained, some of them in large numbers.

"I have not yet a complete catalogue of my plants, but there are between two and three thousand species and varieties, and this without growing many varieties of the ordinary florist's flowers, which would soon make up a long list did one grow them. I love flowers of all seasons, and thus prize the Winter Aconite as well as the latest Starwort of autumn. Of Snowdrops I have a good collection, there being nearly all the known species, besides a number of the best seedling and hybrid forms of this exquisite flower. The Crocus, too, is one of my loves, and I have a collection of considerably over one hundred of the species and their varieties, exclusive of the named Dutch varieties. Then I like the Scillas, and these are in strong force

as well, with their allies, the Chionodoxas. The Daffodil, too, is not forgotten, and I have a representative collection of the various types and forms, although I do not profess to grow the 'Lord Roberts's' or others of the highest price. There are, however, upwards of one hundred species and varieties—quite enough, indeed, for any garden.

"The lower illustration on page 558 shows *N. poeticus* and some Squills in a corner of the garden which pleases most folks. Then there are Tulips galore, consisting of species, Darwin Tulips, English Tulips, Parrot Tulips, 'Cottage Garden' Tulips, and early Tulips. I like these in clumps among the border flowers. Irises also bulk largely, from the earliest bulbous species, the English and Spanish, the Bearded and the Beardless, the Japanese and the *Oncocyclus* Irises. The last are in a frame on the roof of a low portion of my garden study, and are almost directly above where I am writing now. Colchicums and Snowflakes are also favourites of mine, and of these there are good collections of the species. Liliiums, too, are favourites, and there is a gradual addition to their numbers from year to year. Gladioli are also among my loves.

"To attempt to tell of the Alpine flowers would be tedious, for there are Dianthi, Androsaces, Saxifrages, Sedums, Campanulas, and a good representation of the best hardy rock plants. If one can be said to have any special likings for the denizens of the rockeries they may, perhaps, be said to be the Campanulas and the spring Phloxes, though one is doubtful if it is safe to pick out these for special mention.

"Of border flowers what can one say? Pinks are favourites, from old associations as well as because of their own beauty and fragrance, though one likes, too, the taller Campanulas, the Delphiniums, the Phloxes, the *Oenotheras*, Kniphofias, and many more. Then there are the shrubs and trees. Space is too limited for many of either, but there are some of each. Roses are among my favourites, although I grow only some sixty species and varieties. I like the species, but I have a good deal of special liking for the Hybrid Teas and Noisettes, which are so useful for their continuous blooming.

"Small shrubs are prized, and among these I like the dwarf Azaleas (of the *Rhododendron* section), and such things as *Olearia stellata*, shown in the upper illustration on page 558, from a photograph taken by Mr. James Backhouse, of York, when he visited my garden."

Some of Mr. Arnott's notes relating to other illustrations we are retaining, but in them he mentions the beautiful Water Lilies, of which he also possesses a rare selection. Then he goes on to say:—

"I do not delight in a formal garden, which has its uses however, and may well be admired by others. I strive to have a constant succession of flowers, so that my delight in their presence may never go unsatisfied, though there are times, of course, when the little greenhouse has to be one's solace in its Zonals, its forced bulbs, or its curious Cacti. There is a flower which is called the 'gift of the gods,' but there are few which are not divine benefactions to those who love their beauty.—S. ARNOTT."

In another issue we hope to print an additional letter on the making of this garden, and a description of its site and surrounding features.

Literature.

The Book of Bulbs.*

Elsewhere in our pages this week we publish a brief sketch of the antecedents of the author of "The Book of Bulbs." Within the very confined limits at his disposal Mr. Arnott has condensed a wonderful choice of the bulbous and tuberous genera, and added such descriptions and cultural remarks as will enable those with a love for and some knowledge of this class of plants to grow a larger assortment with hopes of success. No words are wasted in idle praise; the subject is tackled right away. Within 114 pages (5in by 7½in) he has written of sixty-eight genera of hardy bulbs, twenty-eight genera of those that are half-hardy, and thirty-two genera of the greenhouse and stove bulbs—in all, 128 genera. The three sections are kept distinct.

But bulbs are not alone included. There are the plants with corms (*Crocus*) and with tubers (*Dahlias*), though the author does not apologise in any way for including these with true bulbs. These handbooks (this is the fifth of the series) are under the general editorship of Dr. Harry Roberts, who contributes the opening chapter and discusses the botany of the subject. The preliminary pages are devoted to short chapters on "Bulbs in the

Grass," "Arrangements in Borders," "Bulbs for Cutting," and "Propagating Bulbs," each very summarily treated.

If there is any fault to find with this little book we think it lies in having attempted to include too many kinds or genera of plants. Of course, all depends on the class of readers the book caters for; but the average gardener will find himself wondering what sort of plants such names as *Belamcandas*, *Lapeyrousias*, *Phædranassas*, *Androstephiums*, or *Boussingaultias* are attached to. As a guide to those who *do* love bulbous plants and wish to extend their selection, the book will furnish a valuable elementary help.

We are pleased to observe a note relative to the beautiful *Tecophilæa cyano-crocus*, which, however, seems hard to cultivate; *Brunsvigias* are not included, nor are the *Hypoxis*, which are easy enough to cultivate and have charming flowers. At the same time the book is a useful one, and no one need grudge the two shillings and sixpence spent in its purchase.

"Origin of Species."

Mr. John Murray, Albemarle Street, London, W., has just issued a popular impression of the corrected copyright edition



MR. SAMUEL ARNOTT, J.P.

(with the approval of the author's executors) of Darwin's work entitled "The Origin of Species," at the price of 1s. net. Darwin's "Origin of Species" has now passed out of copyright. It should, however, be clearly understood that the edition which thus loses its legal protection is the imperfect edition which the author subsequently revised, and which was accordingly superseded. The complete and authorised edition will not lose copyright for some years. The only complete editions authorised by Mr. Darwin and his representatives are those published by Mr. Murray.

Bouquets for Politicians.

"Why," asks the "Westminster Gazette," "should not our monotonous Parliamentary life be diversified by such floral hues as adorn the legislative chambers at Washington? At the meeting of Congress the scene must have rivalled Covent Garden at its best. Senator Proctor, of Vermont, found on his desk a great slipper tastefully decorated with blossoms and greenery. To Senator Kittredge, of South Dakota, was sent a floral harp of such a size that it took two men to bring it into the Senate Chamber. Mammoth baskets filled with the choicest cut flowers decorated the desks of others. We regret to learn, however, that as a rule the Senators who receive such tributes 'seemed to be only moderately impressed by them,' and had them taken away immediately after prayers. Who knows what a mellowing effect upon angry passions might have been produced by these mute reminders of calm Nature?"

* "The Book of Bulbs," by S. Arnott. Handbooks of Practical Gardening Series; V. Price 2s. 6d. nett. John Lane, The Bodley Head. London and New York.

NOTES & NOTICES

Our Next Publication.

The Editor wishes to intimate that as Christmas Day and Boxing Day happen on our usual printing and publishing day respectively in the coming week, the Journal will be published one day later, namely, Friday, December 27. Advertisers are requested to note that we will print next Tuesday, December 24.

Kew Gardeners.

Owing to the persistence of the small-pox outbreak, the Director of the Royal Gardens, Kew, has deemed it advisable that the gardeners there should be vaccinated. The first squad were operated on last Tuesday. How the conscience clause acts we do not know, but some of the young men were inclined to bring it to their aid. However, the vaccination seems a wise precaution.

Damaged Chrysanthemums.

In the action at the instance of James Beisant head gardener, Castle Huntly, Longforgan, N.B., against the Caledonian Railway Company for £100 as damages to Chrysanthemum blooms consigned to Edinburgh, where they were to be exhibited at the Chrysanthemum Show last year, Sheriff Sym, Perth, awarded pursuer £60. In an appeal, says the "Daily Record," Sheriff Jameson has reduced the damages to £30, but allows full expenses against the railway company.

Lamleth Field Club.

At the last meeting, held at St. Mary Newington Schools, and presided over by Mr. H. Wilson, a very instructive lecture on "Fruits and Seeds" was delivered by Mr. E. J. Davies, secretary of a kindred society at Battersea. Mr. Davies succeeded in making clear to his audience the essential nature of fruits and of the seeds they contained, no less by his numerous specimens and well-executed diagrams than by his able methods of exposition, and he earned a cordial vote of thanks for his very capable demonstration.

Fruit Farming in Berwickshire.

An interesting and successful experiment has been carried out in fruit farming by Mr. Sandys-Lumsdaine on his Blanerne estate, near Chirnside. Selecting the most suitable land for the purpose, he commenced by growing Strawberries, for which he found a ready market. This induced him to cultivate Apple trees. He chose what he considered the most suitable varieties in view of climatic conditions, and his enterprise was at length rewarded by a capital crop, followed by a demand far in excess of his means of supply. He has now taken in another field of 14 acres, in which he has just completed the planting of 1,000 Apple trees.

The Greenhouse at Kew.

The following is a list of the plants now in flower in No. 4 house, the Royal Gardens, Kew: *Begonia Gloire de Lorraine* in pots, also in hanging baskets; *Moschosma riparium*, *Salvia splendens grandiflora*, *Freesia refracta alba*, *Reinwardtia trigyna*, *Solanum integrifolium* (in fruit), *Epacris Vesta*, white; *E. miniata splendens*, purplish-crimson; The Bride, white; *Viscountess Hill*, soft blush; *miniata superba*, rosy red; Model, bright pink; *rubra superba*, lilac-pink; and *Diadem*, deep rose pink; *Narcissus Tazetta* *lapyraeus*, *Peristrophe speciosa*, *Centropogon Lucyanus*, *Luculia gratissima*, *Coleus thyrsoideus*, *Primula sinensis* in a large number of beautiful varieties, including fine blue and pink strains; *Primula floribunda*, *P. stellata*, *Calceolaria Burbidgei*, *Jasminum nudiflorum*, *Cyclanens* in variety, *Cestrum aurantiacum*, *Camellias*, *Eupatorium odoratum*, *Grevillea thelemanniana*, *Daphne indica*, *D. i. rubra* and *alba*; also *Rhododendron indicum* in varieties; *Chorizema varium*, *Tibouchina macrantha*, *Lily of the Valley*, *Richardia africana*, *Veltheimia viridifolia*, *Bauera rubioides*, *Eriostemon cuspidatus*, *Rivinia humilis*, *Darwinia tulipifera*, *Tecoma Smithi*, *T. capensis*, *Abutilon Savitzi* (for foliage), *Begonia semperflorens gigantea* *rosca*, B. Turnford Hall, *Hibiscus dentata* (on roof), *Chrysanthemums* in a dozen varieties, *Callistemon salignus*, *Statice profusa*, *Cuphea micropetala*, *Agathaea celestis*, *Senecio grandifolius*, fruiting Oranges, and a number of foliage plants.

Mistletoe.

Considerable consignments of Mistletoe are now landed daily in England for the London market. It is not generally known that there is a red-berried species of Mistletoe (*Viscum crueiatum*). Sweet-scented flowers, in thousands of packages, from the South of France, Italy, and Egypt are received, as well as many tons of preserved and crystallised fruits, which are all despatched by express goods trains to the metropolis.

"The Woodlands Orchids."

We have to acknowledge the receipt from Messrs. Macmillan and Co. of a large book bearing the above title, written by Frederick Boyle, and of which a review will shortly be made. The book ought to prove interesting, for, while written in the form of stories that even the unsophisticated in Orchid matters find attractive, a very great amount of accurate, and even detailed information about this fascinating genus of plants is conveyed. The price is one guinea, net.

Testimonial to Mr. Richard Dean, V.M.H.

It has been suggested that a very suitable date for the presentation of the testimonial would be February 1, 1902, which is Mr. Dean's seventy-second birthday. We understand a proposal will be made at a meeting of the subscribers, which is to be held early in the new year, that Mr. Dean be entertained and the presentation made on that date. Meantime, the subscription list is being kept open, and Mr. Sherwood will be glad to hear from anyone at 152, Houndsditch, London.

Appointments.

Mr. Thomas Wilkinson, for many years head gardener to the late Rev. Talbot Greaves, M.A., at Stoke House, Gloucestershire, and for eight years head gardener with C. C. Tudway, Esq., J.P., D.L. (Somt.), at The Cedars, Wells, Somerset, as head gardener to Antony Gibbs, Esq., J.P., D.L. (Somt.), Tyntesfield Park, near Bristol, enters upon his duties at the middle of January. * * Mr. Elderbert F. Hawes, formerly in charge of the gardens at Stockgrove Park, and Chicksands Priory, Beds, has been appointed head gardener to the Royal Botanic Society of London, Gardens, Regent's Park. He will take up the above duties on January 1, 1902.

The Romance of Plant Life.

At the Mechanics' Institute, Bradford, on December 10, Professor W. B. Bottomley, Professor of Botany at King's College, London, delivered an interesting lecture on "The Romance of Plant Life." After explaining that the term botany no longer signified a dry catalogue of the polysyllabic names of mummified plants, the lecturer went on to deal with that branch of botany which treats of the visits of insects to plants. He described the process of fertilisation, and gave an account of the remarkable means by which some plants are protected against the visits of insects of the wrong kind. The lecture, which was listened to with the closest attention, was admirably illustrated with lantern slides shown by Mr. R. M. Appleton.

Bolton Horticulturists at Dinner.

The annual dinner in connection with the Bolton Horticultural and Chrysanthemum Society was held on Wednesday evening at the Saddle Hotel, Bradshawgate, an excellent repast being partaken of by about thirty members and friends. The chair was occupied by Mr. R. Smith (chairman of the society), and there were present Mr. J. Hicks (secretary), Mr. W. Longworth (parks' superintendent), Mr. J. Moseley, &c. The loyal and patriotic toasts having been duly honoured, the chairman proposed "Success to the Society." They suffered a serious financial reverse at their last show, which had reduced their funds by about £60. This was the most serious reverse the society had experienced during its existence. The three cups presented by the society had also been won outright, but he was pleased to say that he had promises from several Bolton gentlemen to provide other Cups for next year's show. He thought they had the sympathy of the people of Bolton, and, he believed, they were prepared to do their utmost to help them in the reverse which had overtaken them. The toast was heartily received. Mr. C. Jones next proposed the health of the president (Mr. T. Walker, J.P.), and Mr. S. Tatton proposed the health of the chairman. Various other toasts were received, and a musical programme was gone through.

Trade Note.

A handsome coloured plate is included in Messrs. Veitch's seed catalogue for 1902, now being sent out. The subjects are Gloxinias, mostly of the lighter coloured varieties, and shows in little space how great the variation of colours is in this favourite genus of the present day.

Christmas Trees.

Philadelphia insurance companies have issued a circular calling attention to the dangers of Christmas-tree decorations and lighting. It says that the making of certain Christmas displays would, under a strict interpretation of the conditions of the policy, render the contents of insurance void unless the policy is endorsed with a special permission for increased hazard.

The Park Chrysanthemum Growers.

At the annual dinner of the Park Chrysanthemum Society, held at the Sun Inn, South Street, Park, a most enjoyable evening was spent, under the presidency of Alderman John Smith. Alderman Smith was presented with a pair of pearl-handled fish carvers by the society, and in reply promised to further the interests of the Park gardeners and the Duke of Norfolk's tenants. Songs were ably given by Messrs. G. Kerrigan, Judson, Taylor, Marsden, and Waller; accompanist, Mr. J. Marsh. The society bids fair to be most successful.

Orchid Paintings in the Drill Hall.

On Tuesday last both sides of a long stand—the sides sloping either way from the top to the base—were hung with paintings of hybrid and other Orchid flowers, painted at the instigation of the Council of the Royal Horticultural Society for Orchidists, and the society's Orchid Committee more particularly, by Miss N. Roberts. The collection was greatly admired and closely inspected by the specialists. The paintings formed a very welcome feature in the hall on such a dull day. The parentage of each hybrid, the raiser's name, and that of the recorder—Mr. James O'Brien—were given on the reverse side of each of the pictures. Such a true record of the earlier hybrids of Orchid will continue to increase in value as time goes on. Many of the later crosses approximate very near one another, and the question will be how close the similarities of each will be allowed to be drawn while still applying distinctive names.

"Origin of Cultivated Plants."

A lecture on this subject was delivered on December 13 in the Grove Academy, Broughty Ferry, under the auspices of the Technical Education Committee, by Mr. James Wilson, F.R.H.S., Greenside Nursery, St. Andrews, late Lecturer on Horticulture to the County Council of Northumberland. He traced the origin of many of our best-known fruits and vegetables, and pointed out that a considerable number of our cultivated plants are indigenous to Britain. The lecture was illustrated by a fine set of lantern slides showing the wild and cultivated forms, and it was pointed out that the wonderful improvements, which had transformed in many cases useless weeds into useful economic plants, have been the result, first of improved environment and selection, and, in modern times, the art of hybridisation. The lantern was manipulated by Mr. J. B. Corr, Dundee. At the close the lecturer was cordially thanked, on the motion of Mr. W. G. Anderson, who presided over a good attendance.

Pear Growing.

Mr. J. D. Johnstone, Montrose, in his third lecture on fruit culture in the Town Hall last Thursday, devoted his attention to a consideration of Pear and Plum culture. In northern counties of Scotland the idea prevails that Pears cannot be successfully grown, but that idea is exploded on the southern banks of the Tay and Clyde. For old varieties he recommended Bon Chrétien, Beurré, or Hazels Chaumontel, but pointed out the necessity of selecting kinds suitable for different soils. Double grafting was referred to as advantageous for some kinds. The Pear midge was described, and remedies suggested. A portion of his remarks was also devoted to Plum growing, with the difficulties of disposing of the crop when maturity came on suddenly. He believed in employing middlemen for distribution. Thinning too heavy crops was recommended, and other instructions given when branches are overlaid. A number of questions were put and answered, and generally the lecture was appreciated as helpful to local horticulturists. Mr. Johnstone strongly recommended Messrs. Cassell's horticultural publications, particularly that finely illustrated handbook on fruit culture.

Frigi Domo.

On our printing morning a post-card bearing an inquiry comes to hand, and we will allow the writer to address his assignee through "Notes and Notices." The correspondent asks: "Will your contributor, Mr. William Gardiner, state what kind of stuff frigi domo is, and its price per given size? Also if there is any cheaper material for keeping frost off Apricots and Peaches in the open?—INQUIRER."

Tribute to Dean Hole.

An interesting ceremony took place in the Deanery of Rochester on Saturday afternoon last, on which occasion Dean Hole (president of the National Rose Society, and so well known everywhere), who has just celebrated his eighty-second birthday, was presented with the freedom of the Worshipful Company of Tin Plate Workers alias Wire Workers of London, of which he is the hon. chaplain, and an engrossed certificate. The presentation was made by a deputation of the company in accordance with a resolution of the court, and the necessary formalities of taking the oath and signing the register were duly carried out by Dean Hole.

Windsor Gardeners' Society.

The annual general meeting of this society was held in the Council Chamber last week, when Mr. E. F. R. Gould presided. The report and balance-sheet were passed. The society had a most successful show in June, and the report showed that it had been able to place £100 on deposit with its bankers, and, after paying over £100 in prizes and other expenses, had been able to carry forward a balance of £11 8s. The total income from all sources was £321 2s. Mr. Colin Romaine was unanimously re-elected hon. secretary, and Mr. J. F. Hoddinott hon. treasurer.

Newport Horticultural Association.

The annual business meeting of the above association was held on Tuesday, December 10, in Newport Public School, Mr. George Rollo, president, in the chair. The reports of the secretary and treasurer were read and adopted. Thereafter the motion given notice of by the president at the last meeting, to the effect that, owing to the lack of interest on the part of the majority of the members, the Newport Horticultural Association be forthwith voluntarily wound up, was put to the meeting by the president and seconded by the treasurer. No amendment was proposed, and the motion therefore became the finding of the meeting. It was noted that, in spite of the fact that a card had been posted to every member intimating that such an important motion was to come before the meeting, only three members other than committeemen deemed it worth while to put in an appearance.

Weather in S. Perthshire.

The past week has been of a very wintry character. Snow has fallen all over the country, and has lain to a considerable depth in both the northern and southern districts. The frost has ranged from 4deg to 10deg, but in some parts it has been much more intense. On Sunday afternoon a slight thaw lasted for some hours. Monday was a beautiful clear day, with an evident tendency to severe frost.—B. D., S. Perthshire.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1901. December.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ... 8	S.W.	deg. 53·7	deg. 51·9	deg. 54·7	deg. 51·6	Ins. 0·27	deg. 45·1	deg. 44·3	deg. 47·0	deg. 44·6
Monday ... 9	S.W.	deg. 42·9	deg. 39·7	deg. 46·6	deg. 41·0	0·25	deg. 44·1	deg. 45·3	deg. 47·0	deg. 34·4
Tuesday ... 10	N.W.	deg. 36·9	deg. 34·3	deg. 41·7	deg. 33·2	—	deg. 41·1	deg. 45·0	deg. 47·0	deg. 28·0
Wednesday 11	N.W.	deg. 37·7	deg. 35·3	deg. 42·1	deg. 34·5	0·09	deg. 39·1	deg. 44·1	deg. 47·0	deg. 26·3
Thursday 12	S.E.	deg. 38·4	deg. 37·2	deg. 46·6	deg. 29·0	0·77	deg. 38·1	deg. 43·2	deg. 47·0	deg. 22·6
Friday ... 13	N.E.	deg. 43·1	deg. 42·1	deg. 44·1	deg. 38·0	0·11	deg. 40·5	deg. 42·7	deg. 46·9	deg. 34·5
Saturday 14	N.E.	deg. 41·2	deg. 38·7	deg. 42·4	deg. 40·7	—	deg. 41·4	deg. 43·1	deg. 46·5	deg. 37·6
MEANS ...		42·0	39·9	45·5	38·3	Total. 1·49	41·3	44·0	46·9	32·6

A week of dull weather with cold rains on five days. A slight snow storm occurred on the night of the 9th.



Ceropegia Gardneri.

The illustration and notes of the above, on pages 540 and 541 of last week's Journal, were very interesting to me. One point you omitted to refer to was that the flowers form a trap like those of *Aristolochia Clematitis*. Small flies enter the flowers at or about the time the stigmas are ripe, so that if they bear pollen from other flowers cross-fertilisation occurs. They are usually unable to escape until, in the course of a day or two, the pollen is shed, and then the hairs at the mouth of the corolla wither and allow them exit. The hairs in the corolla tube point inwards, so that it is an easy matter for small flies to enter, but the case is reversed when they endeavour to return. No doubt self-fertilisation is the prevailing mode with both *Ceropegias* and *Aristolochias*. About eighty species of *Ceropegias* are known, and have a distribution over parts of three continents, viz., Africa, Asia, and Australia, the natural order to which they are attached being *Asclepiadaceæ*, that claims also *Periploca græca*, a very beautiful glaucous-leaved climber; *Stephanotis floribunda*, the various charming *Hoyas*; the fleshy *Stapelias*, with flowers of a carrion-odour; and also the equally well-known *Asclepias* of our conservatories and plant borders.—J.

Apple Barnack Beauty.

I have read with interest your extract from the "Fruit Trade News" (page 542) on the great merits of the above-named Apple. Without wishing to detract from the merits of Barnack Beauty Apple, I must say the remarks of your contemporary savour a bit too much of the Doctor's Pink Pill business. I have grown this Apple for some years past and can certainly recommend it as a good variety either for cooking or dessert purposes. There are, however, kinds more suitable for dessert use in northern gardens.

Barnack Beauty is well worth growing for eating uncooked. The tree is of a good habit of growth, either as an open bush or pyramid, but for dessert use it is best grown as an espalier, the latter form being the best for growing all eating Apples—in the North, at any rate. Barnack Beauty fruits freely on young trees, and I have seen such in a well-fruited state in the York nurseries of Messrs. Backhouse and Son.

It was raised at a village called Barnack, in Northamptonshire, and was first brought into notice by the late Mr. R. Gilbert, of Burghley. I do not think anyone will regret adding it to their collections, but would doubt their making a fortune by planting it extensively.—H. J. CLAYTON, Grimston, Tadcaster.

[Messrs. Brown, of Stamford, first introduced this variety to commerce. It is not mentioned, "R. M.," in the latest (fifth) edition of the late Dr. Hogg's "Fruit Manual."]

Gardeners and Estate Agents.

I had not intended entering this discussion at all, for although nothing has been said on either side to which exception could be taken by any fair-minded man, yet the fact that it has to be discussed is deplorable—there is no other word for it. I write as a gardener and from a gardener's point of view, and I trust with a fair mind. An ounce of fact is proverbially valuable, and this is fact: A lady engages a gardener through her agent. He has a ten years' reference from his late employer, satisfactory in every particular, the lady and her agent having gone most minutely into all the details of his career for nearly twenty years back. The gardener brings his family and goods to the place at great expense (for a poor man), and works hard to improve the garden and those portions of the estate he supervises. The lady wishes certain improvements carried out, consulting the gardener as to the probable cost, and gives him orders to see the matter properly executed.

To prevent friction with the agent, he tells him of the lady's orders, which the agent immediately begins to find fault with on the score of expenses. Here is the gardener between two stools, and being new to the place he is at a loss what to do. Thinking still to avoid any friction, he puts off commencing the work until the lady and her agent have had time to consult together respecting it. After a reasonable time he begins the work. The agent, seeing the men employed in the gardener's absence, tells them to leave off, and the next thing that happens is a very acrid letter from the lady to know why the work is not proceeded with. Explanations follow. The lady says she

will see her agent on the subject, and in a few days the gardener is ordered to "postpone" the work. From that day onwards he has lost his employer's esteem, and in a very few weeks he gets his notice to quite the lady's service, through her agent. Asking why his services are dispensed with, the gardener is told that "Her ladyship desires me to say that she has no fault whatever to find with you or your work, and you are evidently capable of taking charge of a much better place than hers." There is the three months' notice after three months' service, and although it is very easy to say "Get another place," let anyone with a reference of this kind try it on, and see how easy it is to get one. I have tried it for ten months, and have had a wife and family to keep in the meantime, so will sign myself—
A GARDENER OUT OF PLACE.

Mr. Harman Payne and the Rosarians.

I quite expected to see in your valued Journal, date December 12, some notice of Mr. C. Harman Payne's extraordinary speech at the last annual dinner of the National Chrysanthemum Society. Of course, we must make some charitable allowance for dinner oratory, but I must say, though without prejudice, that such wild language as he is reported as having used is a verbal picture of, not only gross inaccuracy, but vulgar aspersion. I cannot for the life of me understand a "gentleman" saying that the National Rose Society is mostly composed of old spinsters and country clergymen. In the last annual report of the N.R.S. I find that there are included among about 640 subscribers sixteen spinsters (not mostly old, to my personal knowledge) and forty parsons, together with a bishop, a dean (the revered president of the society), and an archdeacon, thus leaving out of 640 members about 580 who are neither old spinsters nor country clergymen. Where do, then, the words "mostly composed" come in? One more inaccuracy and most misleading remark: "There is only one Rose Society, while there are 400 furthering the interests of the 'Golden Flower,' and for every one Rose grower in this country there are 500 growers of Chrysanthemums." For myself I feel bold enough to nearly reverse these figures. There is only one National Rose Society and there is but one National Chrysanthemum Society, and I feel sure that there is only one man in this country who would express himself in the words I have quoted, and that man is Mr. C. Harman Payne.—A MEMBER OF THE N.R.S.

[We think our correspondent takes Mr. Harman Payne's remarks a little too seriously. Much should be forgiven to votaries intoxicated with the glare of the Chrysanthemum, especially when the season is at its height. Wait till the summer comes, and the Rose holds the field again. There will then be balm in Gilead for the rosarian.]

Christmas on Duty.

There's a good old "merry England" smack about "Young Journeyman's" letter, on page 542, that carries one back to the happy, the bright, the unforgotten—the "auld lang syne" of bothydom. Again can old boys enjoy in retrospect, as the young brother enjoys in anticipation, a Christmas day on duty, when poking, stoking, damping down, and matting up still left ample room for inter-sandwiching sufficient "diversion" to give the day a Christmassy flavour. Oh, those right royal feasts in the little bothy on the Cotswolds, against which looms up a memorable black fast in a big bothy elsewhere. However, the pleasant experiences have previously been touched on in "Our Journal," and the fireless, feastless one was not exempt from the pillory of print in its pages, so they shall not be reinflicted on latter-day bothyites. Just a reminder—nothing more—to old heads of the times "when we were boys together," to the end of a little condescension being given at this particular season to the bothy. In scanning the schedule of Christmas goodies compiled by "J. H. M."—"nuts, oranges, cigars, roast beef and plum pudding, with a wee drop of something short," it is but right that he should have the credit he deserves for his menu. Of course, the "wee drop of something short" will be very wee and very short, and the head of "J. H. M." may be very long and very strong—shrewd and sensible—as we may take it from his well-penned letter.

Any objection? No: not exactly, just a suggestion from the pages of the writer's past life. We were big boys in a certain bothy, and there was a little lad fresh from home, ever ready as a young hero worshipper to follow in our footsteps. Said the "missus": "What be you lads gwine to have for Christmas?" "Oh, plenty to eat, missus, and a bot—" "Now, don't 'ee get anything strong, 'cos o' young Newcomer. I'll make 'ee something good." We didn't, and she did. Good motherly old soul. She brought over some eggs—laid them herself, she said, and consequently they were, like Caesar's wife, above suspicion—and with a jug of hot milk and other "ingridinents" concocted a pleasant beverage which pleased all and offended none. Undoubtedly, the good sense displayed by "J. H. M." renders it

needless to apologise respecting the suggestion conveyed as a little amendment to his menu, and the young brother in the bothy, if there is one, will have no stumbling block over which he might trip—over which so many have tripped. That “J. H. M.” and all in bothydom may have a happy Christmas is the hearty wish of—AN OLD BOY.

The above is the title of what you, Mr. Editor, called “a seasonable letter with a good spirit in it.” This made me recall my mind to some years ago when I was in the bothy—not a modern one, either. One of my colleagues had had far too much of what our friend “J. H. M.” speaks of as “a wee drop of some-

is so genial in its survey, and has such an obvious ring of prudence pervading it, that we have not the slightest qualms that such a young gardener will not be able to take “a wee drop o’ something short” and yet conduct himself within the bounds of rigid common sense.]

Rhodochiton volubile.

Sometimes one dares to say there are not enough variety among our greenhouse climbers. There are sufficient beautiful



RHODOCHITON VOLUBILE.

thing short.” Now, sir, I have seen, and I still frequently see, the dreadfully ill effects of this “wee drop,” and I would earnestly urge upon all our young men to leave it alone. Enjoy life as much as you can; do not be dull, but merry; ay, and it can be done, even at Christmas time, without strong drink. I have experienced it for many years, and know that there are many gardeners holding good positions to-day who have done the same without “the wee drop.” Now, Mr. Editor, I wish you a most Happy and Merry Christmas, also to our good old Journal and its writers. How we should miss it each week!—A. J. BROWN.

[Far be it from the minds of any one of our readers to imagine that we countenance or counsel the use of intoxicating liquors to the extent that they lead to bodily or mental perturbation; we abjure such foolish indiscretion. Yet the letter of “J. H. M.”

climbing and twining subjects, if only we would select and grow them. Rhodochiton volubile is one of the best, yet one of the least grown. It is now eighty-nine years since the plant which we figure on page 563, was brought home from Mexico, so that it is not a novelty by any means. The illustration saves us the need to describe the form and general habit of the flowers and the shoots, the colour of the former being bright pink in the calyx and dark purple-red in the corolla. A moderately rich compost of turfy loam, well-decayed leaf soil, and sand, suit it well, though it is at times found planted out in borders. It requires little care, except thinning the shoots and removing the weak and straggly. We trust it may be given a trial by those of our readers who have not hitherto grown it.

National Rose Society.

Annual General Meeting.

Over sixty of the members of the National Rose Society convened at the Hotel Windsor, on the occasion of the society's annual general meeting, last Thursday afternoon, the 12th inst., for the purpose of passing the report and financial statement for 1901. As Mr. Mawley said, this year will always be regarded as the Temple Rose Show Year, and furnishes an outstanding feature in the history of the National Rose Society. Charles E. Shea, Esq., presided, and on his immediate right sat the Father of this rosarians' association, the Rev. H. H. D'Ombraïn. Amongst others known to us we noted the Rev. F. Page Roberts, Rev. F. R. Burnside, Dr. Shackleton, Rev. J. H. Pemberton, and Messrs. E. B. Lindsell, F. Cant, A. Turner, G. Gordon, G. Bunyard, G. Paul, C. E. Cant, B. Cant, A. W. Paul, H. Burrell, Somers Rivers, R. E. West, E. T. Cook, G. W. Cook, W. Taylor, A. E. Prince, O. G. Orpen, R. Harkness, J. Bateman, P. W. Pawle, R. B. Cater, and C. Jefferies.

The usual preliminary business having been enacted, the chairman proceeded to the annual report, which we give hereunder:—

Committee's Annual Report.

The past year has been an eventful one in the society's history, owing to the removal of the Metropolitan Exhibition from the Crystal Palace to the Temple Gardens. As this was the first independent show that has been held by the society for over twenty years, some anxiety was felt as to the success of the undertaking. Fortunately the new venture has met with very general approval, and from a financial point of view, has proved as satisfactory as could have been anticipated, considering how difficult it always is the first few years to make an exhibition of this kind known in London. The show was rendered further memorable by the private visit paid to it by the society's patroness, Her Majesty Queen Alexandra. The display of Roses was, with two exceptions, the largest the society has yet held; but the general quality of the blooms was below the usual standard, Tea Roses and Garden Roses excepted, which in many stands were remarkably fine.

While mentioning the Metropolitan Exhibition, the committee desire to express their keen appreciation of the kindness of the Treasurer and Benchers of the Inner Temple in so readily acceding to the request of our President that the society's exhibition might be held this year in their gardens. They also at the same time wish to acknowledge their great indebtedness to the President and Council of the Royal Horticultural Society in placing at the society's disposal their staff of assistants, who, together with the able secretary, the Rev. W. Wilks, rendered such valuable help both on the show day and previously, and without which help the committee would have had considerable difficulty in making the arrangements for the show as complete and satisfactory as they were. They have also to thank all those members who promised contributions to the Temple Rose Show Guarantee Fund, amounting in all to £357 7s. A novel feature was the insurance of the exhibition at Lloyd's against loss should the attendance be seriously affected by the show day being wet. Fortunately, the day on which the exhibition was held proved fine, and the gate money sufficiently good to prevent any demands being made on the Guarantee Fund.

The first exhibition of the year took place at Richmond, Surrey, on June 26, and was the largest Southern show held for five years. The Northern Exhibition, which was held at Ulverston on July 17, was, on the other hand, less extensive than usual. As regards the quality of the flowers, however, it must be regarded as having been the finest Rose show of the year. At both exhibitions the arrangements made by the local committees were admirable, and much credit is due to the hon. secretary of the Richmond Horticultural Society, Mr. C. R. King, and to Messrs. G. H. Mackereth and F. W. Poole, hon. secretaries of the North Lonsdale Rose Society, for the very complete and satisfactory manner in which those arrangements were carried out.

In accordance with the suggestion of Mr. A. Hill Gray, a series of instructions in the cultivation of Tea Roses has been prepared, and recently issued to the members, under the title of "How to Grow and Show Tea Roses." The thanks of the committee are due to the three Tea Rose experts—the Rev. F. R. Burnside, Mr. O. G. Orpen, and the Rev. F. Page-Roberts—who, at their request, drew up this helpful little treatise; also to Mr. A. Hill Gray for a donation of £5 towards the expense of its publication.

The special attention of the members is directed to the Rose Conference which will be held next year by the Royal Horticultural Society, at Holland House, Kensington. This Conference has the warm support of the committee, and is likely to be the most interesting and instructive meeting of the kind that has ever taken place.

Finance.

Although the expenditure, owing to the cost of holding an independent show in the Temple Gardens, was greater than in any previous year, the receipts have proportionately increased, so that at the end of the financial year there still remains a balance to carry forward to next year of £31 8s. 4d. This the committee cannot but regard as eminently satisfactory, particularly as much of the increased receipts is due to the subscriptions of new members. During the year 200 new members have joined the society. The net gain during the year has been 150 members, bringing up the total number of members now on the society's books to 740.

Arrangements for 1902.

Arrangements have been made with the Devon and Exeter Rose and Horticultural Society to hold the Southern Exhibition at Exeter, which is the most south-westerly locality the society has yet visited. The Metropolitan Exhibition, by the kind permission of the Treasurer and Benchers of the Inner Temple, will again be held in the Temple Gardens, the date fixed for the show day, subject to the approval of the Benchers, being Tuesday, July 1. The Northern Exhibition will take place at Manchester, in conjunction with the Royal Botanical and Horticultural Society of Manchester, on Saturday, July 19. It is now sixteen years since the society last held an exhibition in Manchester, and the committee look forward hopefully to revisiting that city, knowing what successful shows they held there in the years 1880, 1884, and 1885. Prizes will also be offered by the society at the exhibition which will be held in connection with the Royal Horticultural Society's Rose Conference in Holland Park.

Members' Privileges.

In no previous year has the committee been able to offer their members so many substantial privileges. Members subscribing one guinea will be entitled to six five-shilling tickets, and subscribers of half a guinea to three five-shilling tickets of admission to the society's exhibition in the Temple Gardens; or, if preferred, any of these tickets will admit at the opening to either of the society's provincial shows. In addition to this the Council of the Royal Horticultural Society have very kindly promised, free of charge, a seven-and-sixpenny ticket of admission to their Rose Conference in Holland Park to any member who may make application for it. Members joining the society for the first time in 1902 will also receive copies of the following publications: The new edition of the "Official Catalogue of Exhibition and Garden Roses," the revised edition of the "Hints on Planting Roses," the report of the conferences on pruning and exhibiting Roses, the report on the constitution of Rose soils, the Conference report on the decorative use of some garden Roses, and to a symposium on how to grow and show Tea Roses. Members alone are allowed to compete at the shows of the society. Members will be entitled to purchase tickets for their friends for the Temple Rose Show at reduced prices.

The best thanks of the committee are due to the donors of those special prizes which so much increased the attractiveness of the schedule of the Metropolitan Exhibition. Among these may be specially mentioned the handsome prizes offered by Mrs. Champion and Captain Ramsay. They also wish to draw attention to the great help they have this year received from the local secretaries, through whose exertions, assisted by the attractions of the Temple Rose Show, the membership of the society has been to such an unusual extent augmented, and more particularly from Mr. H. P. Landon, Mr. W. E. Martin, Mr. H. E. Molyneux, Rev. F. Page-Roberts, Mr. E. R. Smith, and Mr. R. E. West.

Balance Sheet for the Year ending 30th November, 1901.

RECEIPTS.

	£	s.	d.
Balance at Bankers, December 1st, 1900	1 14 0
Subscriptions	458 5 6
Affiliation Fees and for Medals from Affiliated Societies	57 18 0
Advertisements in Report...	14 14 0
Programme	28 4 0
From Crystal Palace Company (for 1900)	105 0 0
North Lonsdale Rose Society	80 0 0
Richmond Horticultural Society	50 0 0
Special Prizes	70 1 0
Proceeds of Temple Show	407 9 4
Sale of Publications	9 15 5

£1283 1 3

EXPENDITURE.

	£	s.	d.
Printing, Stationery, and Advertising	88 7 6
Postage, Telegrams, and Sundry Expenses	61 12 11
Secretary's Travelling Expenses to arrange Shows	1 15 8
Expenses, Richmond Show	0 13 0
Temple Show	396 4 6
Ulverston Show	2 17 6
Medals	33 13 4
for Affiliated Societies	41 13 0
Contribution to R.H.S. Rose Show	17 0 0
Prizes, Richmond Show	105 5 0
Temple Show	255 10 0
Ulverston Show	135 10 0
Purchase of Plate for Prizes	46 10 6
Assistant Secretary and Accountant (two years)	65 0 0
Balance at Bank	31 8 4

£1283 1 3

1901.—December 1st, Balance at Bankers, £31 8 4

The above report, being highly satisfactory in every respect, was unanimously supported and adopted.

A vote of thanks to the officers and committee of the society for their services during the year was heartily accorded, the reply coming from Mr. D'Ombraïn, who said that though he was not now so active a member as he used to be, was still a most willing one, and he put the question, "Do I not prove it by being present with you to-day?" The day was disagreeably boisterous and wet.

Following this, the date of the summer show, to be held at Exeter, was fixed for Friday, July 4, the Friday being a great market day in this southern town. The probability that the Benchers of the Inner Temple would object to tent poles being erected on the Saturday preceding the Metropolitan show of July 1 was discussed, and a hint was thrown out by Mr. Mawley as to the advisability of putting the opening day to the Wednesday instead of Tuesday, so that full time might be had for erecting and arranging all that is necessary. No proposition was made of this, however, the report having been adopted, and the date remains for July 1.

Mr. Martin rose, and proposed an alteration in By-Law 2: "That this society consist of members paying annual subscriptions of one guinea or half a guinea." He jocularly remarked that the secretaries were earnest in their wish to extend every courtesy to the members of the National Society devoted to the interests of the Rose, and therefore now proposed to stipulate a more respectable annual subscription. The income from this higher amount would be increased by 5 per cent., and instead of £30 balance at the end of next year the officials could expect £50. Mr. A. E. Prince seconded, and the proposition was unanimously carried.

The Rev. J. H. Pemberton then proposed the following addition to Regulation 2: "But where sufficient prominence is given in the schedule to classes for decorative and Tea Roses the committee may grant permission for a two days' show."

This proposition was subjected to considerable debate. Mr. Pemberton began with a reference to the change of venue for the Metropolitan summer show, and thought it a good thing that the members had taken the full responsibility for success or failure on their own shoulders. Turning to the subject in hand, he remarked that up to the present time the society has had a regulation that utterly prohibits a two days' show. No exception whatever is given; not even if the King asked for a two days' show could the officers grant the request without first obtaining the sanction of members. In this respect, continued Mr. Pemberton, your hands are somewhat tied. Thinking the matter over a little time ago, the speaker concluded that the rule might be relaxed, and the rider (given above) added to it. And this for three main reasons: (1) In the interests of Decorative Roses; (2) Trade interests; and (3) financial.

When the regulation was framed Mr. Pemberton had voted with others against a two days' show, but at that time H.P.'s were the Roses mostly exhibited. Now, however, there is a great race of Decorative Teas and Hybrid Teas. Out of 128 exhibits that were catalogued when the regulation was framed only twenty-eight are still in the lists. This shows a change. Further, in 1891 the schedule only contained four classes for Decorative Roses; ten years later (1901) there are thirteen classes for this section.

Trade growers would have the benefit of placing this

beautiful decorative section of Roses before the London public for an extra day. The proposer of this addition to Regulation 2 also brought into his argument a notice of the derivable advantages by pointing out the great advertisement the society and its show would receive on the second morning when the newspapers were published, these also intimating the fact that the show was being continued. Mr. Pemberton pointed out that the society cannot expect the same gate money in the coming show from the fact that the many who became members will receive free tickets. The show day last July was a splendid one. "But what if you had a bad one?" he asked. The second day stands the chance of being a good one, and would be a day of profit. In conclusion he urged that a two days' exhibition be tried, if only for this year.

Mr. Coulery (?), who seconded, said it was a pity that collections and vases of Roses that had required so much pains to arrange should only be on view for four or five hours. Many of the [purely] Decorative Roses would be in better condition on the second day.

Mr. George Paul, of Cheshunt, spoke to negative Mr. Pemberton's proposed addition. "Those," he said, "who remember the two days' shows know that the second day only militates against the finances of the first day." Many people who would come and pay 7s. 6d. on the first day wait until the price is reduced on the second. It is also somewhat of a fraud on the public to bring them in to view faded flowers, and Roses will wither even in well-ventilated tents. And amateur exhibitors from a distance would be compelled to remain, at expense, in London, while trade-growers must also retain a large staff of assistants, and this at a time when Rose shows are being held everywhere over the country; larger prizes would be imperative. Mr. Pemberton had referred to the change for good in the "personnel" of the flowers, but the only H.P. known to Mr. Paul to last well for two days was the beautiful variety, Captain Hayward. Some Decorative Roses might last well for two days and some might not.

In support of Mr. Paul came Mr. O. G. Orpen, who referred to the Roses as "shameless wrecks" when seen even late on the afternoon of the first day, and pointed out that many members of the National Rose Society have already pledged themselves to assist the Rose Conference at Holland House. It has always been one of the most cherished regulations of the rosarians to show fresh and beautiful Roses; only by so doing will the love for them be fostered. Other members also favoured the foregoing views.

The Rev. H. H. D'Ombraïn somewhat contemptuously referred to the Decorative Roses which had been so much lauded, as "Grandmother's Roses," that require no culture further than that of simply sticking them in. Mr. Mawley said he was sorry to prolong what appeared a rather one-sided discussion. The proposition, he said, had got upon the agenda through committee by nine votes to seven (one of the sacred nine had since altered his opinion), and had not been in the least seriously regarded by that body; it was simply allowed in a tentative way. To have a two-day's show would necessitate two separate schedules. Visitors would see third prize stands often better to look at than the first prize sets on a second day. And where would the "premiers" be? Against Mr. Pemberton's arguments that the gate takings could not be expected to be so large, Mr. Mawley quoted a few figures from the records of

the Royal Horticultural Society. This body, in 1888, at its first Temple show exceeded its receipts by £503; in 1889 there were £22 of a deficit; and 1890 gave them a profit of £35, since when the takings have increased.

Letters were then read from the President and the Rev. Foster-Melliar, both siding against the proposal. On the chairman putting the proposition to the meeting six voted in its favour; the others, an overwhelming majority, were against it.

Mr. F. Cant, of Braiswick Nursery, Colchester, now proposed that Regulation 15 be altered to read as follows: "Hybrid Teas are regarded as Hybrid Perpetuals in competition, unless specially excluded by the schedule, and may not be shown in the Tea and Noisette Section." He stated that last summer he had to select two medal Roses at two shows, and he judged the blooms strictly according to the wording of the schedule. At Norwich, "Bessie Brown" (H.T.) was not eligible, and because unrecognised, some discussion ensued in the gardening press. Being seconded by Mr. Bateman, the proposition was unanimously carried.

A new regulation was brought forward by Mr. O. G. Orpen, to the effect that "All boxes must be on the stages where they are to be judged, and all lids removed, fifteen minutes before the time appointed for judging," to which the meeting added this sentence: "Failing compliance with this Regulation, any steward may remove them." Mr. R. Harkness seconded, and, with only a short discussion before the last sentence was agreed upon, the regulation was duly adopted.

Mr. George Gordon proposed that Regulation 18 be altered to read as follows: "All blooms exhibited (except where specially directed in the schedule to be shown in vases or other receptacles) must be staged in boxes of the regulation size, viz., 4in high in front and 18in wide, and of the following lengths (all outside measurements): For twenty-four blooms, 3ft 6in long; for eighteen blooms, 2ft 9in long; for twelve blooms, 2ft long; for nine blooms, 1ft 6in long; for six blooms, 1ft long; for eight trebles, 3ft 6in long; for six trebles, 2ft 9in long; for four trebles, 2ft long." It was felt desirable, he said, to impose a uniform size of box for all classes. Mr. C. E. Cant, who seconded, thought the only failing of the proposition was that it did not seem to go far enough. He should like to see not only uniformity in the size of boxes, but uniformity in the number of boxes in any class. At the present time anyone is open to show seventy-two blooms in six boxes if he likes; though it is generally acknowledged amongst growers to show seventy-two blooms in three boxes of twenty-four Roses each. This, however, is, not always carried out.

Mr. Lindsell thought it a pity to compel small amateur growers to get new boxes should the size of their present ones not correspond with the altered regulation. He added that if seventy-two blooms are not shown in three boxes, a great deal is detracted from their imposing effect. Mr. P. W. Pawle, of Harrow, wished there were no boxes at all; while Mr. Mawley was able to state that the small growers complain most about the small boxes. Affiliated societies are not bound by this regulation. The proposition was unanimously carried.

The result of the scrutineers' survey was now announced, whereby the thirty-six committee were returned as they at present stand; and Mr. H. J. Veitch was returned as a vice-president.

A letter from the secretary of the Sutton Rose Society, inviting the "National" to Sutton for the summer of 1903, was accepted subject to Mr. Mawley being satisfied that sufficient accommodation be forthcoming. Mr. Mawley announced that the expenses of the Crystal Palace Show last year were £102, whereas the Temple Show only entailed £75. A telegram of sympathy was sent by the meeting to Mr. J. D. Pawle, one of the vice-presidents, who has always been present at the annual meeting when well enough. After this, Dr. Shackleton proposed a vote of thanks to Mr. Shea, which was heartily accorded.

Annual Dinner.

Immediately after the business of the afternoon the company assembled at dinner. The loyal toasts were proposed by Mr. Lindsell from the chair, and, in proposing prosperity to the National Rose Society, he reverently alluded to some of the more conspicuous figures who had supported it over twenty years. One of these is Mr. Charles James Grahame, who is sorely afflicted, and gradually passing away. Mr.

Lindsell had observed the report of Mr. Harman Payne's speech in the *Journal of Horticulture*, where he stated that the Rose Society was chiefly composed of old spinsters and country parsons, but he assured them Mr. Payne was a great deal mistaken. All who love a garden love Roses, and this is not confined to any one or two sects.

In replying to this toast Mr. D'Ombraïn said he felt like an old hunter turned out to grass. He always liked to hear of the meetings and read reports of the society. He well remembered when Mr. Grahame first proposed the exhibiting of Roses according to the number grown, which proposition he himself did not like, but has long ago seen how successfully it works. He concluded by saying: "It is not likely I will be long with you; but so long as God gives me strength I hope to show unabated interest in the efforts of the National Rose Society." Mr. Mawley also responded. A telegram of sympathy with Mr. Grahame and his family was also sent from the meeting assembled.

The toast of "The Affiliated Societies" came from Mr. Geo. Bunyard, and the reply from Mr. Cater, Bath. Dr. Shackleton genially recognised the good work the gardening press does for the society. Every week the papers are looked forward to. Mr. Geo. Gordon responded. A vote of thanks to the chairman, proposed by Mr. Geo. Paul, terminated an interesting afternoon and evening.

Onion, Dobbie's Golden Globe.

The half-dozen bulbs depicted in the engraving in outline represent the first prize lot shown by Mr. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts, in competition for Messrs. Dobbie and Co.'s prizes offered at the National Chrysanthemum Society's show, held in the Royal Aquarium, Westminster, on September 17 this year. Of course, the illustration shows the Onions at an exceedingly reduced size. The correct measurement of the largest bulb was 18½in in circumference. Surely that is a model standard. The bulbs, too, were very firm and handsome. Taken together the six first prize Onions weighed 15½lb. These weights and measurements were attested by responsible judges. Only by high culture, however, can one hope to produce such samples. It is worthy of special notice to bear in mind that there were fifty-four—yes, fifty-four!—entrants in this class for six Onions, and six prizes were given. Golden Globe Onion ought not to be forgotten from the vegetable lists.

Societies.

Royal Horticultural—Drill Hall, December 17.

Despite the 14deg of frost registered in various parts around London, with the presence of snow and fog, the meeting in the Drill Hall on Tuesday last was very interesting though not extensive.

Orchid Committee.

Present: Harry J. Veitch, Esq., in the chair, with Messrs. James O'Brien, J. G. Fowley, de B. Crawshay, R. Brooman White, H. Ballantine, Jas. Douglas, H. J. Chapman, H. A. Traev, H. T. Pitt, A. Hislop, E. Hill, J. W. Odell, G. F. Moore, W. H. Young, W. H. White, J. Wilson Potter, Frank A. Rehder, H. Little, Jer. Colman, T. W. Bond, and H. M. Pollett.

Cypripedium Chantini Lindeni, a tall-flowered variety of the insigne Sanderæ type, came from M. Linden, of Brussels. The plants were very healthy and fine. They also staged Oncidium varicosum Moorteneckensis, a very handsome form, with deep blotch at the claw of the lip.

Captain Holford, C.D.E. (gardener, Mr. A. Chapman), Westonbirt, Tetbury, Gloucester, received a silver Flora medal for a group of hybrid and other Cypripediums. Here was C. insigne Standard, C. nitens var. M. de Carte, C. Mrs. Tautz, C. i. citrina, C. i. montanum aureum, C. Milo, Westonbirt var., C. Euryades, C. i. Dormanni, and C. Leeaunum superbum. It was a very fine group indeed, and furnished a great centre of interest. (Silver Flora medal.)

There were various exhibits of one or two plants each from F. Bibby, Esq. (gardener, Mr. J. Taylor), Hardwick Grange, near Shrewsbury. He staged the Lady Stanley Clark variety of Lælia anceps, which is a very noble form. Gurney Fowley, Esq., Sir Trevor Lawrence, Bart., H. T. Pitt, Esq., Messrs. Heath and Sons, and R. Tunstill, Esq., all showed Orchids.

Floral Committee.

Present: Wm. Marshall, Esq., in the chair; with Messrs. Chas. T. Druery, Geo. Nicholson, James Walker, R. Dean, G. Reuthe, Jas. Hudson, H. B. May, H. J. Cutbush, J. Fraser, R. C. Notcutt, C. R. Fielder, Chas. Dixon, Chas. Jefferies, C. J. Salter, Chas. E. Pearson, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, Wm. J. Jones, Harry Turner, J. W. Barr, and J. F. McLeod.

W. Seward, Esq. (gardener, Mr. C. Shrimpton) staged a nice collection of well-grown variety of *Cyclamen latifolium*. These were in 5in pots, with healthy foliage and large flowers.

"Floral-aid" was shown by Mr. C. J. Wakefield, and an im-

a bright rich rose-pink. J. Colman, Esq. (gardener, Mr. W. P. Bond), The Gardens, Gatton Park, Reigate, staged a group of Poinsettias remarkable for their dwarfness, leafy character, and fine head of coloured bracts.

Messrs. Wells and Co., Redhill, Earlswood, staged a group of Chrysanthemums comprising Nora Davis, a large-flowered single with bronzy-chestnut coloured flowers; Mrs. C. Brown, a splendid Jap for decorative uses, pure white; Mme. R. Cadbury, white; Christmas Crimson, a good crimson variety with gold reverse. Others were Sir R. Buller, yellow single; C. W. Payne, after the Mrs. Wingfield type; Gold Lock, long tassel petals; and Clibran's Terracotta.



ONION, DOBBIE'S GOLDEN GLOBE.

provement has been accomplished in having a bark receptacle furnished for placing the wire frames into.

Messrs. James Veitch and Sons, Ltd., once again staged a collection of their most brilliant winter-flowering Begonias, representing vigorous plants in 5in and 6in pots, standing about 1½ft high, and "umbraged" over with large inflorescences. The varieties were Ensign, with many semi-double flowers and of a glowing rose-carmine hue. This is one of the best varieties. Winter Cheer was also present, and for ourselves we hold this to be the brightest, richest, and best. The colour is so deep and vivid (crimson-carmine), and the flowers are 2½in across. Julia represents what may be termed a Balsam-flowered section. It is dwarf, with stout, erect inflorescence, and double flowers of

Messrs. Garaway and Co., Durdham Down, Clifton, Bristol, showed *Viola odorata* King of Violets, a very large flowered variety.

Lord Normanton (gardener, Mr. J. Butler), Normanton Gardens, Stawford, also contributed a number of Violets in the varieties California, large dark flowers and stout stalks, Admiral Avellan, and Marie Louise.

Messrs. H. Cannell and Sons, Swanley, staged a collection of Zonal Pelargoniums in bunches. The best varieties were Lady Sarah Wilson, pink and white; Scott Turner, crimson; Lady Roscoe, deep pink; Mr. Chas. Pearson, rosy pink and scarlet; Lord Roberts, deep purple mauve; and Mary Beaton, pure white. (Silver-gilt Banksian Medal.)

Fruit and Vegetable Committee.

Present: George Bunyard, Esq., in the chair; with Messrs. Jos. Cheal, J. W. Bates, S. Mortimer, Alex. Dean, J. Jaques, F. Q. Lane, W. Poupert, Geo. Kelf, and H. Markham.

Messrs. Froome and Son, High Road, E. Finchley, sent a seedling Apple named Finchley Pippin, which was firm and attractive.

An Award of Merit was given to Captain Carstairs for a new seedling Pear named General Wauchope. Other Apples came from Messrs. Harrison and Sons, Leicester, and Mr. W. H. Hayward, Bowden, Cheshire.

Mr. Harrison, The Gardens, Frinland Lodge, Woodstock, Oxon, showed the new box for containing Grapes for transport. We described the box in our report of the N.C.S. winter show.

A Silver Banksian Medal was awarded to R. P. Cooper, Esq. (gardener, Mr. A. B. Higgins), Ashlyne, Berkhamstead, for eleven bunches of Grapes. Five of these were good and well-finished bunches of Lady Hutt Muscat, the others were splendid Alicantes.

Messrs. Peed and Son, West Norwood, London, S.E., staged a large collection of the leading varieties of Pears and Apples.

Medals of the Floral Committee.

Silver-gilt Flora for group of winter flowering Begonias to Messrs. J. Veitch & Sons, Chelsea. Silver-gilt Banksian for group of cut Zonal Pelargoniums to Messrs. Cannell & Sons, Swanley. Silver Banksian for group of Chrysanthemums to Messrs. Wells & Co., Ltd., Redhill, Surrey; for group of Poinsettias to Mr. J. Colman, Gatton Park, Reigate; for group of Cyclamen to W. Seward, Esq., Hanwell, Middlesex.

Certificates and Awards of Merit

Begonia Agatha (Messrs. J. Veitch & Sons, Ltd.).—Very much like Gloire de Lorraine, but is far more floriferous; the inflorescence form a dense, though graceful mass of bloom over the foliage, which is large and robust. The parentage was *B. socotrana* × with *B. Moonlight*, the latter itself a hybrid.

Chrysanthemum Golden Princess Victoria (Messrs. Wells & Co., Earlswood, Redhill).—A dwarf, brilliant golden-yellow Jap from the white Princess Victoria (Award of Merit).

Cypripedium × *Troilus* (J. Gurney Fowler, Esq.).—A handsome variety from *C. Sallieri hyeanum* and *C. insigne Sanderi*; the dorsal sepal is large and bold, incurving round the edges, with a broad white margin and green centre; the central rib is chocolate; the wavy petals come forward, and are tinged brownish over a greenish ground; the lip is brown (Award of Merit).

Lycaste Tunstilli (R. Tunstill, Esq.).—A flower as large as *L. Skinneri*, and same form, but of a dull, faint purplish colour on sepals and petals; deeper hued lip (Award of Merit).

Pear General Wauchope (Captain Carstairs).—A good dessert Pear taking after Duchesse d'Angoulême form. This with Ne Plus Meuris were the parents. The skin is greenish yellow. We hope to figure this variety (Award of Merit).

Potato Dobbie's Improved Kidney (Dobbie & Co.).—Nice even Potatoes, with comparatively smooth skin (Award of Merit).

Potato Ker's B. (Mr. W. Ker, Dumfries, N.B.).—A roundish, even Potato with shallow eyes (Award of Merit).

Potato Ellington Prolific (W. Ellington, West Row Gardens, Mildenhall).—Over medium size, somewhat pronounced eyes, smooth and even (Award of Merit).

Potato Fylde Wonder (W. Troughton, Preston).—Round, even, comparatively smooth and shallow eyes (Award of Merit).

Bristol and District Gardeners'.

The fortnightly meeting of this association was held at St. John's Rooms on Thursday evening, December 12th. Mr. Hancock presiding over a moderate attendance. The essay for the evening was on Stove Plants, by Mr. J. T. Curtis, gardener to Alderman W. Howell Davis, J.P., which was in every respect a most practical one, and one which reflects great credit not only on the essayist, but also on the association itself. Mr. Curtis divided his subject into three parts—stove climbers, flowering and foliage plants, dealing with details in a clear and masterly way. He gave an excellent selection of all three varieties of stove plants, their mode of culture and treatment, their usefulness for decorative purposes, and the insects which infest them, and best means of prevention and eradication.

At the outset he remarked he was giving his own practical experience, which showed he was a successful cultivator of no mean standing. Where the gardener has no proper stove house, Mr. Curtis gave directions as to the arrangement of the different varieties, so as not to overcrowd and yet be able to grow them with success. The compost for each plant was carefully gone into, the lecturer imparting his knowledge to his audience in a clear way, from which they were able to obtain many valuable hints. The culture of such plants as the Gardenia, Pancratium, and Eucharis he minutely described, giving clear and concise details for their successful cultivation. The Croton being one of the favourites for table decoration, Mr. Curtis described his mode of growing them, the compost they thrive best in, and the best methods for feeding.

Concluding his paper, the essayist laid great emphasis on the good work this society is doing, remarking that not only were gardeners themselves obtaining valuable information by attending the lectures,

but that their employers were undoubtedly also reaping the benefit by having better gardeners in consequence. His paper was much appreciated, and it was hoped that at some future date Mr. Curtis would continue his paper, which had been so instructive and interesting. A hearty vote of thanks terminated a most enjoyable evening. Prizes for two foliage plants suitable for table decoration were awarded as follows:—The lecturer gaining first for Alderman W. Howell-Davis, J.P.; second, Mr. Francis Taggart, F.L.S., J.P. (gardener, Mr. Binfield); and equal third to Mr. J. B. Brain (gardener, Mr. Atwell) and Mr. Price. Certificates of merit went to Alderman W. Howell-Davis, J.P. (gardener, Mr. Curtis), and to Mr. Alfred Hall (gardener, Mr. Ware) for *Zygopetalum Mackayi*. A special certificate of merit was recommended for Mr. Arthur Baker, J.P. (gardener, Mr. Orchard), for a beautiful *Lachenalia rubrum*.—H. K.

Dulwich Chrysanthemum.

The eighth annual dinner and distribution of prizes of the Dulwich Chrysanthemum Society took place on Wednesday last at the Montpelier, Choumert Road, and was attended by about seventy members and friends of the society. The proceedings throughout were of a most enthusiastic character, and under the chairmanship of C. Bayer, Esq., a very enjoyable evening was spent. Amongst those present were many who are well known in the Chrysanthemum world, Mr. Percy Waterer, Mr. J. H. Witty, Mr. Moorman, Mr. Norman Davis, Mr. C. W. Tagg, all testifying by their presence the interest taken in the society, and they were eloquent in their praises of the management and of the high character of the recent exhibition. When it is noted that the secretary was able to report an increase of twenty-six members during the year, making a total membership of 158, and anticipated a balance in hand of about £40, it is easily realised how well deserved were the eulogies so readily bestowed. Many valuable special prizes were promised during the evening, including a gold medal by Mr. Norman Davis.

Insect Enemies of the Strawberry.

In consequence of its mode of growth the Strawberry is a plant peculiarly exposed to the attacks of insects that are accustomed to secrete themselves, when not feeding, beneath the soil or under the shelter of chance objects. Much injury may be done, and the cause escape detection, if the rows are not examined both by day and night. Washing and syringing cannot always be carried out, even if this were of proved utility in the case of some insect pest, nor can the plants be beaten or shaken with advantage, and searching for small species is tedious work, yielding unsatisfactory results. Something may be done in the way of trapping certain insects whose habits are known, but the destroyers at the roots are apt to escape notice until the injuries are well-nigh fatal to the plant. We have an advantage over these subterranean species with those crops that can be shifted from place to place in a way that is not possible with the Strawberry. It is one of those plants occasionally attacked by the grub of the crane fly (*Tipula* sp.)

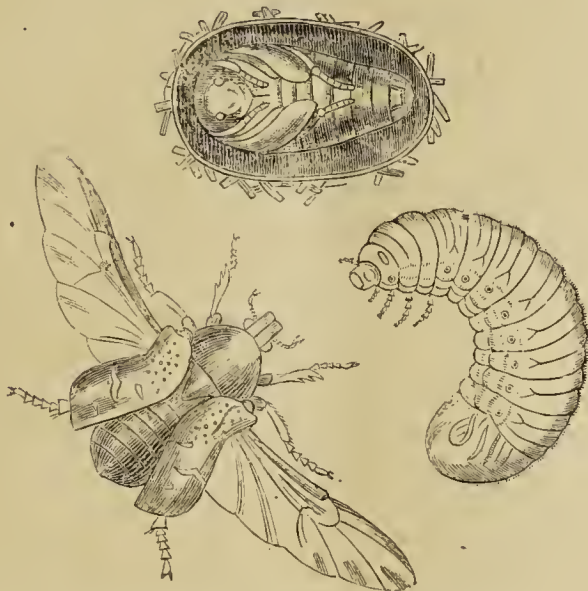
We proceed to notice the beetles that are hurtful to the Strawberry in various stages of its growth, and begin with those species that are decidedly mischievous to the ripe or unripe fruit. Both in Britain and in America observations in several localities prove that more than one species belonging to the family of the Carabidae, carnivorous by habit, and reputed formerly to be friends and not foes, will destroy quantities of Strawberries. One of the conspicuous species has been identified as *Harpalus ruficornis* (see figure), and it is most probable that some others in that genus act similarly when they have opportunity. The beetles of the genus are variable in size and colour even in the same species, and are therefore difficult to classify. The "tarsi" or feet of the males have the basal joints dilated, and the wing-cases are generally dotted over with numerous punctures. During the day they hide under any convenient object, or, should the weather and soil be dry, they will get into cracks of the earth. After dark they come forth, perhaps by hundreds, where they have established a colony in a Strawberry bed, and feast upon the fruit much to its damage.

Why they should devour this instead of, or in addition to, their natural food is at present unexplainable, the chief point with the gardener is to put a stop to their proceedings. Trapping them has answered well. At first putting down pieces of boards and slates was tried; the beetles concealed themselves under these, but their agility enabled them to escape frequently when they were turned over. It was found an improvement to lay in suitable spots drain pipes



filled with hay, which served to attract the beetles, and from which they could readily be shaken and killed.

* Samples of beetles belonging to another genus, *Amara*, have also been forwarded, accompanied by the statement that they were caught in the act of feeding upon the fruit. These, like the *Harpali*, are predatory and combative, so much so indeed, that several of them cannot be kept together in a box without a skirmish speedily commencing amongst them. Popularly they are called Sunshiners, because they love the sunshine, and therefore differ from the preceding in appearing



THREE STAGES IN THE LIFE OF *CETONIA AURATA*,

by day and only hiding when alarmed. An old superstition is that ill luck or misfortune will befall a person who kills a Sunshiner; but in spite of this the gardener must protect his Strawberries from beetles of such an eccentric taste if he can. Trapping might be tried with these also, as they are supposed to hide at night. Having wings of good size, which they readily put into use, they are not always to be caught by day when they are seen. In form they are somewhat squat, with the thorax broad behind, and the wing-cases striated, are small in size; colour mostly blue or bluish green; some individuals are bronzy, or even black. The larvæ of all these species are supposed to be feeders upon other insects of subterranean habit, and therefore they may help to check some of those which damage roots.

The late Miss Ormerod, LL.D., in her excellent "Manual," gives a prominent place to the green or rose chafer, *Cetonia aurata* (see figure on this page), as a foe to the Strawberry, but I do not think it has been often complained of by the cultivators of this fruit. The mature insect is said to injure the blossom, and from its size and appearance could hardly fail to attract notice where abundant, as I have sometimes seen it hovering in parties about Privet bloom or Roses in full flower. From its underground life, however, the larva or grub might escape observation easily, or be unrecognised if turned up with sundry creatures of similar habit. June is the month in which the beetle usually emerges. On the upper side the colour is metallic green with whitish streaks resembling cracks across the wing-cases; the under side is coppery, tending to a rosy hue. The structure of the thorax prevents the wing-cases from opening widely, so that although the insects fly well they cannot raise these when on the wing in the manner beetles commonly do. The clubs of the antennæ are composed of tiny flat plates, which are moveable like the divisions of a fan. All the older entomological works state that the larva feeds upon wood; in reality it is, as noted above, very commonly a destroyer of the roots of low plants or shrubs, but lives also in decayed wood or wood soil. Resembling somewhat the grub of the cockchafer, it is rather thicker than that insect, and clothed with short hairs. It is usually discovered lying in a curved position, the hinder part of the body being thicker than the head; their life as larvæ is reckoned to last about two years. Rooks are reported to hunt them eagerly, and the application of diluted gas lime or a weak solution of paraffin has been recommended where their presence is suspected. There is no great difficulty in securing the beetles by a hand-net.

When killing beetles amongst our Strawberries we must avoid injuring any species that is beneficial. *Carabus auratus*, for instance, one of the ground beetles, we are likely to see running eagerly about in search of its prey; it seizes caterpillars, snails, and other beetles, fearlessly laying hold even of the bulky cockchafer. This insect is golden-green, with a

larger body than the rosechafer, and we at once distinguish it from that species by the three sculptured ribs on the wing-cases. The blackish larva or grub is also a killer of insects. This only comes forth at dusk to hunt. There are, however, other beetles that are now and then foes to the Strawberry, but which I merely name here, as their history belongs to that of other plants they visit more habitually. One of these is the bracken, dock, or June bug, *Phyllopertha horticola*, an enemy of fruit trees; but the beetle has in some seasons stripped Strawberries of their blossoms. Then *Otiorynchus sulcatus*, also called the black, or Vine weevil, has been taken on the fruit of Strawberries; and the grub of another, the red-legged weevil, *O. tenebrioides*, occasionally infests its roots. The particular aphid of this plant is named from it *Siphonophora Fragariæ*. It is a shining green with long antennæ and red eyes, very like the aphid of the Rose. Some years few are to be perceived, in others they cluster on the fruitstalks during May.—ENTOMOLOGIST.

Irish Notes.

The Royal Horticultural Society of this country held its annual meeting on Monday last in the Central Lecture Hall, Westmoreland Street, Dublin. It was sparsely attended, and owing to the intense bitterness of the day the President, Lord Ardilaun, who has been recently indisposed, was unable to take the chair. In his absence Sir Percy Grace of Monkstown was called upon to preside. After the usual formalities were proceeded with, the secretary, in rendering an account of his stewardship, said he was pleased to show the financial aspect of society had improved. The executive of the society had allowed themselves to drift into the sands of insolvency, and, as a desperate cure, they desired to close the spring show, but a steady response from the horticulturists gave the Council a sum of £70 (?), which enabled them to retain this function, although the society was in debt to the tune of close on £150. The shows, being favoured with fine weather, have proved a great success, and enabled them to reduce the debt to something like £14, which was possibly, if not largely, aided by the subscription for the spring show. Several members were up for re-election, and the resignation of one of the former Council, Major Cusack of Abbeyville, Malahide, on the ground of ill-health, and the one vacancy for a practical member in the place of Mr. P. Brock, late of Glenmore, did not call for a re-election, as the remaining number on the ballot paper went on automatically, being only seven, the same number offering themselves for re-election.

His Majesty the King has kindly consented to become the Patron of the above society, whilst the executive have determined, or rather committed themselves to a promise, to hold the winter show in a centre nearer the metropolis. It certainly does not sound absurd why such a society cannot erect a hall, and carry on the duties of a real, active horticultural society. At present the desire to raise the standard of horticulture has not passed beyond mere idle chatter for fear of endangering its reputation of being a show for the eclectic.

Owing to a want of courtesy on behalf of the Royal Dublin Society I have been unable to forward a report on their winter show, likewise a note on the inauguration of an Irish Arboricultural Society, which has assumed a permanent shape. Many of our leading landowners have signified their intention of joining. They intend to diffuse a love for sylviculture throughout the country, the channels to be utilised being the chief educational establishments and the model farm at Glasnevin. Where the study of forestry has been initiated, without dealing further with their prospective programme, it seems a waste of energy in discussing the fact that our cultivators require a mental drilling in the study of forestry and its economic benefits; our growers are tired listening to advice. What we want is a practical scheme, wherein the reclothing of our land (largely boggy) can be reclaimed; the kind of trees to cultivate, the formation of effective screens, the best means to obviate insect and fungus attacks, and danger of woodland fires due from sparks by passing trains. A plan embracing these points would lead to the education.

This country is purely an agricultural; the replanting of woods is desirable to aid our cultivators. It would largely control the climate and enable larger returns to be made from the land, a fact at the present hour of our experience that does not call for proof. "It is a well known fact that in both Canada and the United States the yield of the Wheat crop gradually diminishes as the forests are cleared, and that the heaviest crops of this cereal are found on land sheltered by woods"—(from the second last edition of "The Forester," by James Brown, page 8 of my copy). This would show that the proper course would be to plant with this view, though, strictly speaking, this would be a restricted one, yet it would be capable of public expression based on the following rule—To aim at sheltering the fields where tillage is in progress. Thus, if our new society would select sites, the formation of woodlands might not be a giant's task, but if they aim in trying to make it a timber-producing centre, the labour of finding a means to carry it through may be retarded. However, the starting of such a society is a necessity, and if not too ambitious good should accrue to their well intentioned efforts.—A. O'NEILL.

Young Gardeners' Domain.

Hints for Young Heads.

(Continued from page 522.)

"Beauty is the soul of inspiration." In the arrangement of the tropical house lays a splendid opportunity for the exercise of a deft hand and a critical eye, which is apparent in countless trifles summing up perfection. It may be, often is, that high culture and thorough cleanliness rule, and yet there is felt to be one thing wanting, and that is tasteful arrangement. It is a simple matter in itself, but when the requirements of every plant have to be considered in the matter of space and position it is a complex task. As with ourselves, so with plants; they have their likes and dislikes, and it is not rare to find a plant unhappy in the one position thriving in another part of the same house. Light, shade, heat, moisture, and air are all variable quantities within the circumscribed area of any one plant-house, and require due consideration. Stages for the plants must, however, be considered. The old step-ladder staging is, surely, of all internal fixtures the abomination. Possibly more plants can be crammed into a given space by its aid, but as cramming enters not into our curriculum such means must be employed as will make our houses attractive, display plants (not pots) to the best advantage, and cater for their whims and fancies, as well as give facility for the constant attention they demand.

Flat table-like stages raised about 3ft from the floor suit all purposes admirably, and plants can always be elevated when necessary on inverted pots. These stages must, perforce, be adapted to the house. A span-roof house of, say, 16ft wide, may be fitted with a central table 6ft in width, side staging 2ft, leaving a clear passage of 3ft all round. Virgin cork 3in or 4in in depth forms a tasteful edging to the stage, which in the case of metal frames and slate slabs is easily attached to a heavy lath run round the margin of the stages for the purpose; or, in the latter case, a more permanent edging of rough coke dipped in Portland cement may be used. Fine bright gravel washed clean, or broken shells, covering the stages, has both good effect and value as a moisture-retaining medium. A fringe of *Panicum variegatum* with dwarf plants interspersed—such as *Pilea muscosa*, *Saxifraga sarmentosa*, the red and white-veined *Fittonias*, and other of that ilk—are very suitable for this marginal table decoration. The Maidenhair-like *Muhlenbergia* is, too, a good plant for the purpose.

Cuttings, merely, of the above plants are sufficient, and tightly rolled in a little fresh green moss may be firmly tucked into the interstices of the coke or wedged inside the cork, with a little of the gravel drawn over the base. Soil of any kind on the stages should be avoided, but a good watering twice daily through a rose must be given. A rough rockery under the stages in alignment with the floor edging, filled in with old potting soil, is adapted for the growth of *Rex Begonias*, *Panicum plicatum*, *Ophiopogons*, and other coarser-growing plants, with patches of *Fittonias* and *Ferns* interspersed. Needless to say, all these things flourish amazingly, and form a pleasing feature where otherwise an intolerable bareness would reign supreme. With head room over the paths, various beautiful and useful twiners and trailers particularly well adapted to the position are always accessible for training and cutting. Plants most prominent for this purpose are *Bougainvilleas*, *Allamandas*, *Stephanotis*, *Thunbergias*, *Ipomæa Horsfalli*, and the choicer *Passifloras*, particularly *P. kermesina*, which is a gem for the tropical house. The free-growing habit of the above plants when planted out—which they should be, if possible—necessitates due regard both in planting and training to avoid overcrowding.

For covering bare walls *Ficus repens* is, for the purpose, what the *Ivies* are outside, but choicer things must not be lost sight of, such plants as *Pothos argyrea* and the climbing kinds of *Æschynanthus* being very desirable. Where it is expedient to clothe an end wall with the larger-foliaged plants, coke dipped in cement, with an amplitude of pockets for soil, is from its permanence infinitely preferable to the less lasting method of netting the wall and packing it with peat and moss. There is a plant in particular which, where room is afforded, one would like to see on a wall in every tropical house, viz., *Monstera deliciosa*, its quaintly cut noble foliage and habit of growth rendering it a peculiarly striking object. Further remarks on this phase of our subject need not detain, for this auxiliary adornment is capable of being carried on until every bare place is made to contribute its share to the beauty and interest of the whole. In fact, anything advanced must be regarded rather as suggestive than empirical.

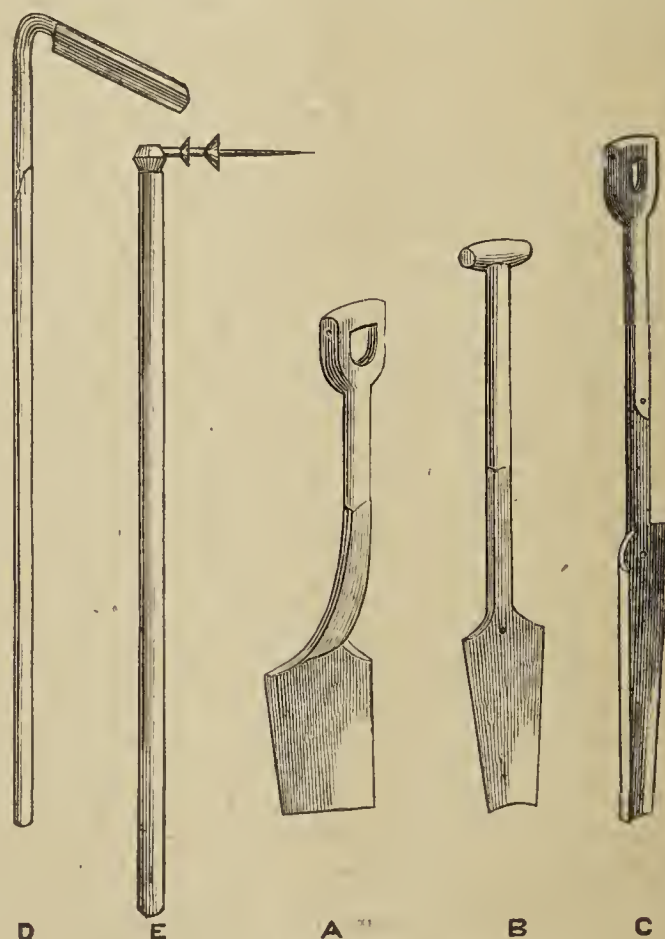
With a house thus beautified few will find a more interesting job in plant culture than the periodical dismantling and re-arrangement of the plants necessary to keep them in perfect health and order; and, it must be said, no more tiring one. All pots to be marked, every plant critically examined for insect pests, or—what is better—if the plants are known to be clean, a spraying with the Fir-tree oil solution to keep them so, entails considerable labour, but is a labour of love when method prevents confusion. The more forethought given to this work the

greater satisfaction when completed. It is as well to impress this need of a system, for the want of one may, often does, end in a muddle. Now and again splendid examples of what the tropical plant-house should be are met with, and an intelligent youth will hardly fail to find in them some object lessons, for they are the best teachers. It is easier to copy models than to follow rules. But above and beyond that, the young practitioner cannot commence too early in life to mentally criticise and form an independent judgment of all the examples of gardening in its manifold phases he will meet with. Most youths possess an inherent feeling tending to this mental analysis; but many stifle it from some vague assumption that certain things must be right because certain people do them, or do not do them, so are content to dog along in the visible sheep-tracks of routine or rest in the calm neutrality of indifference. A word of warning however, lest the exercise of this prerogative should lead to its abuse. The writer knows that at the age of twenty he was pretty strongly imbued with that most detestable failing termed priggishness, but, unfortunately, he never knew it until he was—AN OLD BOY.

(To be continued.)

Drainage.

Roughly stated, enough rain falls annually in this country to cover the entire surface of the soil to a depth of 2 feet. What becomes of all this water? In most cases it disappears as it



DRAINAGE TOOLS.

falls, being promptly absorbed by the soil; the plants growing in it take up a certain quantity, but the bulk of it sinks down in undrained soil to a depth determined by the nature of the subsoil, which is generally so compact that it retains much water near the surface, where it becomes stagnant and unwholesome. The baneful effects of such shallow water tables are clear and unmistakeable, and may thus be explained—

1, The soil becomes sour and unfit for the food of many plants.

2, Its temperature is so low even at midsummer that growth is slow and crops backward.

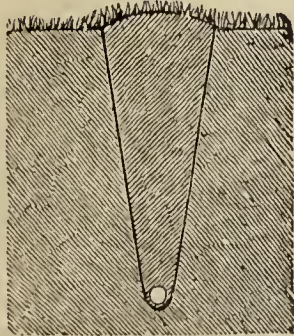
3, This lowness of temperature arises from the accumulation of so much stagnant water near the surface, its temperature at a depth of 2 feet being only 47 deg. in the heat of summer. It chills the soil above it, as it constantly ascends by capillary attraction. It chills the atmosphere by evaporation so much that frosts at midsummer are by no means uncommon. Early frosts in autumn destroy tender vegetables prematurely. The frosts of winter are of exceptional severity, and are proportionately destructive, and with the late frosts of spring hopes of a fruit crop repeatedly vanish. Soil that is thus, in the words of quaint old Tusser, "with water oppressed," is certainly in an unsuitable condition for a kitchen garden, and must be drained before anything else is done. Considerable

diversity of opinion exists as to the position and depth of the drains; but it is not at all a matter of mere opinion, for we have the sure evidence of practical results for our guidance. As a general rule the best depth for drains is 4 feet from the surface, because by keeping the water table at this depth we get rid of all hurtful upward spreading of water by capillary attraction, and the attendant mischievous evaporation which I have already explained, and no water can then accumulate in the soil permeated by the roots of vegetables or fruit trees.

"How can I have drains 4 feet deep," said a gentleman to me once, "when I have only 3 feet of soil upon a bed of granite?" I know, too, a garden with a shallow soil of less than 2 feet upon chalk. But neither of these nor similar cases at all affect my position. Thirteen years ago the site of the new garden here was drained with 2-inch pipes at a uniform depth of 4 feet, and with the drains 30 feet apart running into a main 4-inch drain. Now, the soil consisted chiefly of silica in such minute particles that its tenacity closely approached that of pure clay, water passing through it so slowly that much remained upon or near the surface for a considerable length of time after a heavy shower of rain. But then the fact of its certain subsequent improvement for the growth of vegetables and fruit pointed so unmistakeably to a radical change in which mechanical division must be so thorough that superfluous water would sink to the drains quickly even at that depth, and no hesitation was felt in doing it. Certainly nothing could be more satisfactory than the result. From the first the drains have acted well, and since the soil has been improved it becomes dry so quickly, even after heavy rain, that successional cropping can always be done in due season. A rich, friable, warm, fertile soil, in which many half-hardy plants pass unscathed through the severity of winter weather now exists where once its cold, sodden, inert and almost barren condition gave very little promise of successful cultivation, the first and most important step towards which was undoubtedly the drainage. Warmth and dryness are not, however, the only benefits which the soil derives from thorough drainage. A certain degree of fertility also naturally results from it, for the vacuum made by drains beneath the surface gives admission to air laden with fertilising gases, such as carbonic acid, oxygen, and ammonia; not, it must be owned, in sufficient quantity for the requirements of gross-feeding vegetables, but still in some degree promoting the soil's fertility.

Turning now to the actual details of the work, it will be well to explain them so fully that a beginner may be enabled to see clearly what to do and how to do it. With very few exceptions, then, the drains are to be 4 feet deep and 30 feet apart, and each drain must run from the higher to the lower part of the garden into a main drain. Take, for example, a kitchen garden I know which slopes gently from north to south. The first drain was made 15 feet from the west wall and parallel to it, starting from the foot of the north wall and running down to the main drain 10 feet from and parallel to the south wall. The second drain is 30 feet east of and parallel to the first, and the other drains follow regularly at the same distance throughout the garden, all of them being of ordinary land drain pipes 2 inches in diameter and 1 foot long, except the main drain, which is of similar pipes 4 inches in diameter, without socket or flange of any kind, but quite plain, as shown at B, in our small figure.

In digging the trench for the drains three spades are required like A, B, C, the top spit being taken out with A, the next with B, and the bottom with C, thus avoiding all unnecessary removal of soil. The bottom of the trench is then cleaned and hollowed with the scoop, D, and the trench is then carefully examined before a single pipe is put in it in order that any faulty work may be set right. This is important, for the drains are usually made by the perch, and unless the workmen are closely looked after the work will not be well done. The pipes are laid with E, and the soil put back again, the drain then being complete as shown in the section A. When the garden has no slope it sometimes proves difficult to give the drains the necessary gradient to carry off the water quickly. A good way of overcoming this difficulty is to make several short diagonal branches emptying into a main drain, so as to secure the few inches of fall without materially lessening the depth of any of them.—E. L.



SECTION OF A DRAIN.



Fruit Forcing.

PEACHES AND NECTARINES—EARLIEST HOUSE.—The trees in the house started at the beginning of the month, and having been forced in the previous year, will now have the blossom buds well advanced towards flowering, when syringing the trees must cease. Where there is a redundancy of blossom remove those on the under side or back of the shoots. Admit a little air constantly at the top of the house, and this, with the warmth in the hot-water pipes, will keep the air in motion, and moisture will be deposited on the glass instead of on the blossoms. The temperature may be retained at 55deg by day and 50deg at night in mild weather, but 5deg less in severe weather is more favourable to the trees than the higher temperature, and the setting of the fruit is not prejudiced if the temperature falls to 45deg at night or even to 40deg in very sharp weather. It is necessary when the flowers show the anthers clear of the petals that the house be freely ventilated, avoiding cold draughts, and not exciting the trees by too much fire heat.

To keep the trees in steady progress the temperature, however, must be raised early in the day to 50deg, and kept between that and 55deg through the day. The aim should be to have stout blossoms, sturdy stamens well raised above the pistil, loaded with abundance of pollen, well-developed pistil, and properly formed ovary. These all require time to develop and aëration for their perfecting, when recourse can be had to shaking the trellis or brushing over the blossoms with a camel's-hair brush on fine days after the house has been ventilated for some little time. The pollen, by either of these processes, is distributed in a golden shower, visible in the sunlight; and when this is the case the set is generally a good one, even without artificial impregnation, and sometimes the disturbance of the air by lightly syringing the trees serves to effect the setting in a satisfactory manner.

SECOND EARLY HOUSE.—To have ripe fruit of the second early and midseason varieties at the end of May or early in June the trees must be started not later than the new year. At the new year fire heat should be employed to maintain a night temperature of 40deg and to insure 50deg by day, above which ventilate freely. This will bring the trees on sufficiently fast to insure sturdy blossom, and once they make a start it is necessary to keep them in steady progress. If the house has had the roof-lights removed the inside borders will have been thoroughly moistened through to the drainage, and not need water for some weeks; but where the roof-lights are fixed the border may need a thorough supply of water, and if dry it will be necessary to repeat the applications, for nothing short of thorough moisture in the border ought to satisfy the Peach grower, always steering clear of a soddened and sour condition. Outside borders should be protected against frost. A few inches thickness of dry leaves, with a little litter over them, answers admirably.—ST. ALBANS.

The Kitchen Garden.

PROTECTING CELERY.—Severe frost following wet weather is often very trying to the Celery crop, and the leaves suffer. To obviate this is to some extent a little temporary protection should be afforded whenever the frost looks likely of becoming severe. Dry litter or Bracken spread thinly over the rows will protect the leaves so long as it remains dry. A little long straw laid thinly on each side of rows and meeting over them is also an efficient protector. To hold it in position run a string along each side. The best protection of all, however, consists of two boards nailed together forming a A-shaped arrangement, which should be fixed above the plants.

MUSTARD AND CRESS.—Seed should be sown frequently on the surface of fine soil in boxes. These must be given a warm position, such as the hot-water pipes. Cover the seed with paper to encourage a more even germination.

LETTUCE PLANTS IN FRAMES.—Give constant attention to these, picking off yellow and decayed leaves as they appear, also lightly stirring the soil among them. So long as the soil is fairly moist, water will not be required. Give abundance of air on every favourable occasion, with a little at all times except in very frosty weather.

PARSLEY.—A few good roots should be lifted and placed in a frame, boxes, or pots for use in severe wintry weather. It is advisable also to cover some with a frame and light, standing the frame on a brick at each corner.

EXAMINING ROOTS.—Potatoes are all the better for being frequently looked over in order to remove decaying and diseased tubers. It will also be necessary to rub off the sprouts where they are pushing on tubers intended for consumption. Seed tubers which may be pushing shoots ought to be placed on end in shallow boxes, and be elevated to the light, which serves to retard and strengthen the growth. On these tubers rub off, however, all the shoots but two. Look to Onions also, separating any bulbs from the bulk which show signs of decay. A very dry, but cool, position suits Onions best. Give extra protection to Carrots, Beet stored in sheds, in the event of hard frost. Lift a supply of Parsnips, Artichokes, Horseradish, and Salsafy, and lay under ashes in a sheltered position under wall or hedge or in a shed.—LYMINGTON, HANTS.



- All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

1. Can the boles of Apple and Pear trees of twenty years' growth or more be earthed up 2ft or 3ft from above the collar, in a sloping embankment, without causing injury?—(W. R.)

1. The boles of Apple and Pear trees of twenty years' growth or more may be earthed up 2ft or 3ft above the collar in a sloping embankment without causing injury, in case the soil used in the embankment is of a porous nature and the extent of the embankment is not greater than the spread of the branches of the trees. I have repeatedly done this in the case of rockeries, and even embankments where it has been desirable to clothe the ground beneath the trees with shade-loving subjects and for sake of appearance, reserving the trees for purposes of screening, sheltering, and even producing fruit. Where, however, the embankment is wide, extending considerably outward beyond the spread of the heads of the trees, and the soil of the embankment is of a heavy nature, the burying of the trunks up to 2ft or 3ft has been attended with injury to the trees, they gradually going back and becoming diseased, often resulting in canker and complete collapse. This is unquestionably due not so much to earthing up the boles 2ft or 3ft and the large roots near the stem, as to covering over the feeding roots at the area corresponding to the spread of the branches deeply, thus depriving the soil there of the assimilating influences of the atmosphere, the roots being placed in conditions practically corresponding to subsoil, and ill-health, as follows deep planting, is the consequence. Still, under such circumstances, I have known the trees survive even in fair health and productiveness for several years. In some cases I have known the trees to root from the trunk into the soil in which embedded, especially from scars, and thus remain healthy indefinitely.

2. Can Portugal Laurels or Laurels, Holly, or Ilex, of 8ft in height be transplanted with absolute safety, and must very great care be used? If not, what is the height entailing least risk?—(S. D.)

2. Portugal Laurels are always difficult to transplant, going back for a time even when small (1½ft to 2ft in height). In the case of larger plants careful transplantation is necessary to prevent "going back" to a serious extent, or even partial dying back of the younger growths; then plants up to 3½ft to 4ft in height may be safely transplanted, but the lesser size 1½ft to 2ft or 2ft to 2½ft when recently transplanted are most safe. In case of plants 8ft in height the best plan is to cut off the heads, shortening back the stem and side branches at least half, leaving little beyond the bare stem and branches thus shortened, then lifting with a goodly number of roots and a fair-sized ball, and carefully planting in the spring during mild weather in March or April, according to season and locality. The plants will break freely from the old wood and form in the course of two or three years very fine specimens, well furnished with branches. In cutting back the lower side branches should be left a foot to 18in in length, and the branches above them cut more closely and gradually nearer the stem upwards, so as to give the desired pyramidal or globular form to the heads desired. The bushes 8ft in height would be best cut back two-thirds in both stem and branches, and this will compensate for the loss of roots in transplanting and render the removal safe. Common Laurels also

transplant badly when of large size, those of 8ft height requiring to be cut back about three-quarters in both stem and branches, and then they transplant fairly well, breaking strongly from the old wood and base. They, however, are not equal to young plants of 1½ft to 2ft recently transplanted. Ilex or Holly of 8ft height are difficult to transplant when the trees have been grown from planting whilst quite small in position without transplanting, as the roots are not very fibrous, and the loss of young rootlets in transplanting, even when carefully performed commonly results in casting of the foliage and going back of the growths. It is different when the trees have been recently transplanted, as in the case of nursery stock, as then the trees may be lifted with balls, and the check consequent on transplantation is not material. If not recently transplanted the heads of the trees should be reduced at least one-half, better two-thirds, and then lifted with a fair amount of roots and, if possible, a goodly amount of soil or ball adhering. They will grow freely, recuperating in the course of a season presentably, and in two or three years forming handsome specimens. Hollies are safest transplanted in May, or if an early season, at the latter part of April, preferably during moist mild growing weather.

ADDRESS (S. D.).—Mr. Abbey's address is 4, Whitbread Terrace, Hatfield Road, St. Albans; but you will notice our intimation, of all communications on matters connected with the *Journal of Horticulture* being addressed to the Editor.

HEATING BY OBSOLETE BOILER (W. R.).—We consider you were right in your recommendation, and the engineer wrong; at least the whole is a most obsolete system of heating by hot water, being neither effective nor economical.

BOOK ON ROSES (Hon. M. E.).—You will find Wm. Paul's shilling book on Rose culture useful; obtainable at all booksellers. Or, "Roses; how to Grow and Exhibit Successfully," R. E. West, Firth Dene, Reigate, 1s. But perhaps the best book of all for you is "The Book of the Rose," by Foster-Melliar, from Macmillan & Co. The price we do not know, but it is more than 2s.

VALUE OF ASPARAGUS PRODUCE (G. F. O. T. B.).—The produce of an acre of Asparagus in full bearing is about 1500 bundles of 100 heads each, and may bring in the markets an average of 1s. per 100 heads for the season, or about £75 per acre. As you have manure at command at relatively small cost, there is no question of its being utilised advantageously for Asparagus culture, but whether a 3-acre plot with a cottage upon it would let readily is matter for your consideration. One thing is certain, that after the Asparagus was worn out the land would be in good heart for market gardening purposes, whether fruit trees as dwarf bushes, or vegetables were taken in hand.

LEAN-TO HOUSE UNSATISFACTORY (F. W. R. M.).—The structure is not suitable for any kind of plant with which we are acquainted, not having any ventilation but the openings to which you allude in front, this being brickwork 4 feet in height. It would perhaps be more to the purpose to pull the house down and have it erected in a proper manner than to make provision for roof ventilation. In this case it would be advisable to have at least 18 inches of glass in front, which need not necessarily be made to open, but ventilators should be provided in the 2 feet 6 inches of brickwork, and not more above the floor line than 1 foot, they being about that depth, 3 feet long and 6 feet clear between. With similar provision for ventilation at the top of the house, the ventilators being alternate with those in front, and not less than 18 inches in width, the house would be suitable for Peaches and Neectarines, or other fruit trees, or it might be utilised for Tomatoes from May to October inclusive. It is worth considering, however, whether you could not provide ventilators at the upper part of the house, and thus render the culture of subjects that succeed in an unheated house feasible.

ROSES IN POTS (Granville).—Successful growers of Roses in pots repot them every year, not necessarily in larger pots if the plants are already large and the accommodation for growing them limited, but that they may make new roots, and receive a greater amount of good food during the summer that is so essential for producing fine flowers in the following spring. The best time for potting Roses is in the month of June, directly after they have finished blooming, using a compost of two-thirds of good turfy loam and a third of well-decayed manure Tea Roses having the addition of a little leaf soil and sand. By repotting them at that period the new roots take kindly to the soil, which enables the plants to make good growths early, that become hard and ripe before the summer is ended. After potting they should be plunged in an open situation, and a thick coating of manure placed around and over the surface of the pots, so that the roots are kept cool, and the rains wash in the properties of the manure. Roses in pots are often spoiled through neglect during the summer, which is the season they should receive the most attention. You would not reap much benefit by repotting now; the better plan would be to loosen and remove a portion of the surface soil, and apply a top-dressing of rich compost. Prune the plants during this month and the next, tie the points of the shoots downwards, and allow them to break very steadily and without any assistance from fire heat. They may possibly break back from the old wood. As they advance in growth a slight sprinkling of blood manure over the surface of the soil will strengthen them, using a solution of cow manure and soot as the flower buds advance.

NAME OF PLANT IN NEWSPAPER (J. J., Lancashire).—You should not attach great significance to names of plants you may meet with in a large number of the daily and weekly newspapers. As a rule they are wrong, and often very stupidly so. Even a leading London daily a little while ago reported that a fine collection of "Picture Plants" (meaning Pitcher Plants = *Nepenthes*) was staged in the Drill Hall. The name you refer to—i.e., "Pernellyn"—is probably meant for *Pernettya*, a genus of Ericaceous hardy evergreens, with white flowers and berries varying in colour according to the species. *P. angustifolia* is a very fine subject. We would advise you to secure a number of these plants.

HEATING APPARATUS (W. T. C.).—This usually arises from the feed pipe entering the boiler at the flow pipe end, and not at the front end, the coolest and lowest point of the boiler. For this reason some prefer to have the feed pipe on the return pipe of the apparatus, just before this enters the boiler, when there is seldom any backing-up but that due to the swelling of the water, which, of course, must be provided for in the feed cistern, so as to prevent running over. Excessive firing would cause the backing up to be greater, as the swelling of the water is correspondingly more than when the water is heated less highly, and that seems all that is the matter with the apparatus, the feed cistern not being deep enough above the ordinary swelling level to allow of the extra swelling under hard firing. It is also a bad plan to have the feed cistern on a level with full hot-water pipes, in the latter of which some swelling should be allowed for, and then the ballcock in the cistern acting properly, a due deep of cistern allowed for swelling, and the air pipes in good acting order, there would be little or no backing-up or running over.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. L.).—*Nephrodium molle*. (J.).—A good form of *Lælia aneeps*. (N., Exeter).—*Chimonanthus fragrans grandiflorus*; this is the earlier of the two. (Andrew Potter).—1. *Bauera rubioides*; 2. *Tibouchina macrantha*; 3. *Ipomœa Horsfalli*. (Hill).—*Stenotaphrum glabrum variegatum*.

NOTE TO CORRESPONDENTS.—A large number of queries are held over this week; but we hope to answer fully in our next.

Trade Catalogues Received.

Cannell & Sons, Swanley, Kent.—*Seeds*.

J. R. Pearson & Sons, Chilwell Nurseries, Lowdham, Notts.—*Seeds*.

J. Veitch & Sons, Ltd., Chelsea.—*Catalogue of Seeds for 1902*; also "List of *Chrysanthemums*, 1902"; "List of *Carnations and Picotees*, 1902."

Covent Garden Market.—December 18th.

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz. ...	6	0 to 8	<i>Lilium l. rubrum</i> ...	2	0 to 2
Asparagus, Fern, bnch.	1	0	<i>Lilium longiflorum</i> ...	5	0
Bouvardia, white,			<i>Lily of the Valley</i> , 12		
doz. bunches...	6	0	bnchs ...	12	0
Bouvardia, coloured,			<i>Maidenhair Fern</i> , doz.		
doz. bunches...	6	0	bnchs. ...	6	0
Camellias, white...	3	6	<i>Marguerites</i> , white,		
Carnations, 12 blooms	1	3	doz. bnchs. ...	2	0
Cattleyas, doz. ...	8	0	,, yellow, doz. bnchs.	0	6
<i>Chrysanthemums</i> ,			<i>Odontoglossums</i> ...	5	0
specimen blooms,			<i>Primula</i> , double white,		
doz. ...	1	0	doz. bunches...	6	0
,, white, doz. bnchs.	4	0	<i>Roses</i> , <i>Niphetos</i> , white,		
,, coloured, doz. bnchs	3	0	doz. ...	1	0
<i>Cypripediums</i> , doz. ...	3	0	,, pink, doz. ...	4	0
<i>Eucharis</i> , doz. ...	6	0	,, yellow, doz. (Perles)	2	0
<i>Gardenias</i> , doz. ...	6	0	,, red, doz. ...	0	0
<i>Geranium</i> , scarlet, doz.			<i>Smilax</i> , bnch ...	2	6
bnchs. ...	9	0	<i>Stephanotis</i> , doz. ...	0	0
<i>Hyacinth</i> , Roman,			<i>Tuberoses</i> , gross ...	6	0
doz. bunches...	8	0	<i>Violets</i> , single, doz ...	1	6
<i>Lilium lancifolium alb.</i>	2	0	,, double, doz. ...	3	0

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
<i>Aralias</i> , doz. ...	5	0 to 12	<i>Ferns</i> , var, doz. ...	4	0 to 18
<i>Araucaria</i> , doz. ...	12	0	<i>Ferns</i> , small, 100... ..	10	0
<i>Aspidistra</i> , doz. ...	18	0	<i>Ficus elastica</i> , doz. ...	9	0
<i>Chrysanthemums</i> , doz.	0	0	<i>Foliage plants</i> , var, each	1	0
<i>Crotons</i> , doz. ...	18	0	<i>Lycopodiums</i> , doz. ...	3	0
<i>Cyclamen</i> , doz. ...	10	0	<i>Marguerite Daisy</i> , doz.	8	0
<i>Dracæna</i> , var., doz. ...	12	0	<i>Myrtles</i> , doz. ...	6	0
<i>Dracæna</i> , viridis, doz.	9	0	<i>Palms</i> , in var., doz. ...	15	0
<i>Erica gracilis</i> , doz. ...	10	0	,, specimens ...	21	0
,, <i>caffra</i> , doz. ...	15	0	<i>Primulas</i> ...	3	0
,, <i>hyemalis</i> ...	9	0	<i>Shrubs</i> , in pots ...	4	0
,, alba... ..	12	0	<i>Solanums</i> ...	8	0

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	6	0 to 8	Lemons, <i>Mescna</i> , case	12	0 to 16
,, dessert ...	8	0	Oranges, per case ...	4	0
Bananas ...	8	0	Pears, English, ½ sieve	0	0
Figs, green, doz. ...	0	0	Pears, French, crate ...	9	0
Grapes, <i>Alicante</i> , lb. ...	1	0	Pines, St. Michael's,		
,, Colman ...	1	0	each ...	2	6
,, Hamburg ...	0	0	Plums, ½ sieve ...	0	0
,, Muscat ...	2	6	Walnuts, ½ sieve ...	0	0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2	0 to 3	Leeks, bunch ...	0	1½ to 2
,, Jerusalem, sieve	1	6	Lettuce, Cabbage, doz	1	0
Batavia, doz. ...	2	0	Mushrooms, forced, lb.	0	8
Beans, French, per lb.	0	8	Mustard & Cress, pnnt.	0	2
Beet, red, doz. ...	0	6	Parsley, doz. bnchs ...	2	0
Brussels Sprouts, ½ sieve	2	0	Potatoes, English, cwt.	4	0
Cabbages, tally ...	1	6	Radishes, doz. ...	1	6
Carrots, doz. bnch. ...	2	0	Seakale ...	1	0
Cauliflower, doz. ...	3	0	Shallots, lb. ...	0	2
Corn Salad, strike ...	1	0	Spinach, bush. ...	2	0
Cucumbers, doz. ...	6	0	Tomatoes, Canary con-		
Endive, doz. ...	1	0	signment ...	4	0
Herbs, bunch ...	0	2	Turnips, doz. bnch. ...	2	0
Horseradish, bunch ...	1	6	Watercress, doz. ...	0	6



Bran and Its Usefulness.

Those who advocate the imposition of an import duty on foreign flour find one of their strongest arguments in the comparative dearness in this country of the offals of Wheat, and maintain that the increased importation of Wheat instead of flour would not only encourage home millers, but also confer great benefit on farmers as consumers of feeding stuffs.

At the present time Wheat is worth about £6 per ton, whilst milling offals are worth £6 7s. 6d. to £6 10s., and American flour from £5 15s. 9d. to £5 19s. 6d. Here we have flour, which is supposed to be the valuable part of Wheat, selling at less than the Wheat itself, which, in turn, is cheaper than the so-called offal. A very natural inference to draw from this is that flour is the offal, and not the sharps and bran. The reason put forward for the rise in the value of these articles is the very high price of Maize, which is worth almost as much per quarter as Wheat, and actually more per pound.

That this dearness of Maize will cause many large consumers of it to considerably restrict its use we do not doubt, and it is evident that farmers would be very unwise to sell Wheat or Barley to buy Maize at the present time. Wheat and Barley, but especially Wheat, are considered to be unsuitable foods for horses, and so they are, as used by farm servants on the sly, unground, and in very uncertain quantity; but we know a large number of farmers who mix a portion of Wheat and Barley meal amongst the horse Corn; and we believe the practice is an increasing one. But we do not recommend the use of these meals either alone or mixed together except in very moderate quantity, say 6lb or 7lb per head per day. But what is to be added? Well, bran!

We add bran to Maize meal, and make from the two articles a healthy food for horses. Why not add bran to Wheat and Barley meal? The fact that there is bran already in the meal by no means proves that the supply is sufficient. As a fact, the proportion of laxative bran to heating and binding starch is insufficient to be safely given to the delicate stomach of the horse, and for this purpose the supply of bran must be increased. Seven pounds per day of Wheat or Barley meal with 4lb of bran would make an excellent and safe Corn allowance during the short working days when horses stand so much in the stable. We are strongly of opinion that whatever the other ingredients may be, no mix-

ture of Corn for heavy horses is perfect without a certain proportion of bran at any time of the year.

Bran is not fattening, but it is not fat that pulls the waggons and the ploughs. At any rate, athletes are not trained on such lines. Weight and beautiful appearance do not weigh much in the scale in a trial of endurance. And we should like to hear the opinion of some hard-worked horses as to the kind of food they themselves considered to be most sustaining.

A case which came before our notice some years ago, and has been mentioned in these pages before, we think is worthy of repetition. A man undertook a large contract for the marling of a considerable extent of sandy soil. He had a large number of horses, which he fed upon cut hay and straw, with the addition of a liberal allowance of Corn or meal. He tried a variety of grain and meals mixed and otherwise, the while keenly observing the working powers of his teams. Before the contract was finished he was using no Corn whatever, but an unlimited supply of bran, the hay and straw allowance, of course, remaining the same. After a long and exhausting journey or day's hunting one of the safest and most reviving things to give a horse is a bran mash. If it is good in emergency, why not as a staple article of diet?

The modern cowkeeper depends largely on bran as a food for his cows. Its nitrogenous nature is most useful in encouraging the flow of milk, and where the supply of hay has to be purchased bran might be used in considerable quantity now that there is little difference between the prices of the two articles. For calves nothing in the way of food is more suitable than bran. It is rich in flesh and bone forming matter, and it may be gradually substituted for half the linseed cake allowance after the milk diet has been withdrawn. The same argument applies in the case of young pigs, but where a large supply of skim milk is available the bran would be hardly necessary.

Without milk, however, pigs should certainly have an allowance, mixed with other meal in moderate proportion. The reason why coarse sharps make such an excellent food for young growing pigs is the fact of its containing a good proportion of flesh-forming material. Flour is the fat and bran the lean meat, while sharps are between the two. We should not give bran to young horses out at grass in winter. They require something of a more warming and fat-forming nature, such as Barley or Maize meal, or a mixture of these with crushed Oats.

Cows both before and immediately after calving will be much benefited by a diet in which moistened bran is predominant. There would be fewer cases of milk fever if all cows were so dieted for a week or ten days before calving; but bran, though good for milk, is not a producer of butter fat, so, if butter is the chief object, oil cake must be gradually substituted as soon as all danger of the fever is past. A great point about bran is the fact that the greater part of its nitrogen and phosphates are returned to the soil in the shape of residuals, which are highly valuable for manurial purposes.

Work on the Home Farm.

For a week we have rung the changes on frost, snow, and thaw, with an almost continuous gale. Little can be done on the land. We have seen horses ploughing, but thought they would have been better at home. The export of Potatoes is rapidly extending, and is now occupying all available hands on many farms. It requires great effort for the occupier of a 200 acre farm to sort and deliver three or four miles into boat as many as 50 tons of Potatoes in four or five days. Yet such is being done.

Up-to-Dates are not beating everything. A neighbouring grower is delivering 8 tons per acre of Findlay's "Challenge," whilst retaining 4 tons of seed and 2 tons or more of offal. Not bad for such an early variety. It is whispered that some of the seed is going back Fifehire way.

The weather is all against the storing of Swedes. It is worse than useless to touch them when frozen, apart from the discomfort experienced by the men carrying out the work.

The frosts have much reduced the top carried by Swedes, and it is certainly not necessary to cut anything off. We have with the greatest success pried Swedes, untopped and untailed, and this season, when the roots are neither large nor over-sound, we strongly recommend the system to our readers.

Really well-fed cattle are selling very well, notwithstanding some market reports, and the Christmas fat stock shows have been anything but well supplied so far. The margin between fat and poor cattle is greater now than it has been for some years, and shrewd men are realising their fat beef and buying in stores whilst the golden opportunity offers.

Lair on Turnips has been bad, and ewes are still kept principally on grass, which is fairly plentiful, though there may not be much nutritious quality in it—certainly not so much as it has in some seasons. Old winter fog is sometimes almost as good as hay, but not this year. Whilst ewes keep all the more healthy on grass they must not be allowed to get too low in condition, to prevent which nothing is more useful than 6oz to 8oz per head per day of well-ground cotton cake and malt culms in equal proportions.

Hoggets are doing well, but as roots are scarce and disappearing fast an increase in the cake allowance here is certainly called for. As Christmas approaches and the cold strengthens the young sheep need more dry food, i.e., cake and Corn, which may be gradually increased until Candlemas, when 1lb per head will not be too much. As the days begin to lengthen again, with the increase in the cake we must not forget the weekly dose of brimstone. The heavier the work of the stomach the greater need to keep the blood in pure condition.

A Land of Sugar and Milk.

(Concluded from page 478.)

Continuing his description of the natural resources of Queensland and New South Wales, our correspondent says:—"The New South Wales Creamery Butter Company have, we are told, a very equitable system of dealing with the suppliers as a first payment, and suppliers of milk receive monthly not less than 25-16d. per gallon for milk tested 3.6 per cent. of butter-fat, and in proportion, according to quality, on this basis: Suppliers of cream receive not less than 6d. per lb of butter; and should the prospect of the British markets warrant it, the first payment is increased from time to time. Such monthly advances become absolute payments, and are not subject to any reclamations in the event of an unprofitable market. Upon realisation of the season's butter in London, a further payment is made to suppliers according to the prices obtained. Thus, if butter realises 100s. per cwt., the price paid to suppliers for milk is at the rate of 25-16d. per gallon; at 112s. for butter, the farmer is paid 37-16d. per gallon for milk. A similar schedule of prices is adopted for cream suppliers; if the butter realises 100s. per cwt., the supplier is paid 79-16d. per lb, and with the London price at 112s. per cwt., the supplier gets 813-16d. per lb. The next largest concern, that of Messrs. Foley Brothers, has a different system of dealing with its clients. To all suppliers of milk or cream a deduction of 3 per cent. is made on each account from September 1, 1901, to March 31, 1902, the fund so formed being left to accumulate until the original accounts come back from London, and are placed before suppliers, duly audited, and all profits through shipment, together with the fund collected, are handed over to the producers in their entirety, in proportion to the amount contributed by each one. In case of loss, the fund alone is drawn upon to make it good, and any further loss is paid by the firm. These terms seem to give the milk producers ample satisfaction, and the prompt monthly payments give the dairymen a great advantage over the sugar growers, who only get a return from their cane crops once in two years."

DOG-MUZZLING.—From the Secretary to the Board of Agriculture we have received the following notice:—"The Board of Agriculture desire to draw attention to the fact that their muzzling orders hitherto in force in certain districts in South Wales, and their orders imposing certain restrictions on the landing in Great Britain of dogs from Ireland, have now been withdrawn. There are now no districts in Great Britain to which muzzling orders made by the Board are applicable, and the free movement of dogs between Great Britain and Ireland is permissible. In order to prevent its re-introduction into the United Kingdom and the possible re-imposition of muzzling orders, the Board have felt it to be their duty to issue a new order entitled the "Importation of Dogs Order of 1901," which requires, in effect, that every dog from abroad landed in Great Britain after March 15 next, shall be detained and isolated at the expense of its owner, upon premises in the occupation, or under the control, of a veterinary surgeon for a period of six calendar months from the date of landing. Without a licensee no dog from abroad can be legally landed in Great Britain. Prior to the date named the landing of dogs will be authorised on conditions substantially the same as those now in force.—T. H. ELLIOTT, Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W., December 12, 1901.

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**Journal of Horticulture.**

THURSDAY, DECEMBER 26, 1901.

Reading.

It may safely be hazarded as a proposition needing not to be proved that we are a reading people, the comparatively few who do not read being the proverbial exception found in cases of every kind. Gardeners of the old school took to reading, or at least were said to do so, as to something inherent to the proper carrying out of their calling, and for a very long period the peripatetic reader of literature in "numbers" found his chief supporters in the garden bothies, which were never passed on his periodic journeys.

It is undoubtedly true that the stock works, bought conscientiously by succeeding batches of young men, were not always so up-to-date as the prices charged might have led one to expect. I have still some examples by me—monuments at once of the desire for mental food in these bygone days, and of the ignorance of the purchaser in disbursing hard-won shillings on effete literature. But it is fair to say that it was not all of that nature, and some books, not easy to buy to-day, remain to lessen one's regrets over other less valuable bargains. I am not sure but the very fact of having to pay so much for every book one added to the little collection enhanced its value in one's eyes, and made the reading and digestion of the contents more a matter of duty than the omniferous reader of to-day ever feels in his experience. This leads me to the point I want to specially emphasize,—which is, that much of the literature current to-day, and that most largely read, is not only of no value to the reader, but may actually be hurtful to him. The amount of perishable material at the disposal of the botheyite less than a quarter of a century ago could hardly

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, Intimations of Meetings, Queries, and all Articles for Publication, officially to **"THE EDITOR"** at **12, Mitre Court Chambers, Fleet Street, London, E.C.**, and to no other person and to no other address.

hurt his mental digestion, and, a little earlier, one or two weekly newspapers and the gardening paper afforded the meagre sum-total of current literature ever thought of. The present century commences with, say, two dailies, several weeklies, largely crammed with material of an exciting nature, the inevitable "Tit-Bits," "Answers," sporting papers, illustrated penny papers, the cheaper monthlies, and these are eked out if there is a reading library, or club, within easy distance, with a supply of the more expensive magazines, and not a little fiction in book form.

Now, let it be said at once, it does not follow that a little of this kind of reading is necessarily hurtful. I am sometimes told that no year passes without a personal imbibition of the works of certain favourite writers of light literature; it is not quite true. Certain books of certain authors, perhaps, undergo an annual perusal, and I enjoy some of the witty sayings one meets in the best of the papers that exist to tickle the people. But that is not the point. The fact is, that a confirmed reader of the literature just alluded to cares to read nothing more solid—not improbably he could not if he tried, and what he does read is forgotten as soon as read. Of that I think there can be no doubt. He is a chronic dyspeptic mentally, and worse off than if he were incapable of reading at all.

I fancy I observe, too, in the literature of gardening a tendency to levity, a desire to cater to the prevailing taste for "fine" writing. The books read most pleasantly, and we enjoy the process of absorption; but when completed we are ready to exclaim with that hungry fellow after his first experience of a jelly, "It goes down fine; but it's not very filling." The greater part does not repay or call for a second perusal, and it is to the solidly filled pages from practical men of the best type that we go again and again when in want of advice or information.

It will be plain to the young man who may read this that the writer entertains pronounced views on the matter under review. He may consider them strained somewhat beyond due limits, and be apt to think the whole discussion as therefore of no value. Nevertheless, the principle is a correct one; but, beyond that, there is another proposition worth considering; which is, that keeping light literature in its due place, Reading is not quite so simple a matter as it is generally thought to be. It is quite common for readers of, say, an article that arouses their interest in a horticultural paper, to derive quite a wrong impression from its perusal, and sometimes they write condemning things in the article which in reality are not in it. [Very true; almost the rule, in fact.—ED.] They point out deficiencies which are not lacking. How many submit to the inevitable, and merely register in their own mind the writer a blockhead, it is hard to say; but the number, could we discover them, is doubtless not a few. It is, therefore, a plan to be commended in the case of any specially interesting article, to re-read it; and, after an interval, read it again. All good writing that contains something more than words, should be read more than once; and, indeed, all our greatest writers, let us say from Chaucer to Tennyson or Ruskin, cannot be read too many times; each fresh perusal discovering new thoughts and new beauties.

Reading, too, has a powerful influence when we attempt to write for others. We do not expect practical gardeners to be so well educated as to be able to judge, with absolute precision, the value of words; to set down their thoughts crisp and clear, and to produce a fresh, clean-cut picture of the subject they undertake to paint in words. But it is an undeniable fact that men with an inferior education to start with, can, by careful reading (which assumes they choose only the best authors), become expert writers. I have once or twice advised clever young gardeners, whose knowledge of gardening was above the average, to put their experiences on paper. In most cases they have failed, not because they had nothing to say, but because they knew not how to say it, and were so disappointed with the appearance their matter made in print—sometimes much curtailed—as to give up writing as hopeless. Reading is an infallible aid in such cases; but writing should not be discontinued, because it is a valuable help to reading. A favourite author of mine tells me, "Reading maketh a full man; writing an exact man." And, further, one cannot write, if he writes "exactly," without greatly benefiting his own mind.—B.

Christmas in the Garden.

Gardens and gardeners, like the rest of places and people, seem to move a little out of the ordinary routine at Christmas time. It is true the feast falls at a dull season, there is little that is cheerful about the garden itself, solitude reigns supreme in nooks and dells oft frequented in summer days, but yet the magic spell of Christmas affects the surroundings. As a rule "the family is at home" at the festive season, children from school, and friends from a distance, who forget the gloominess of the garden and draw no comparisons with its appearance a few months back, when all was gay with leaf and flower. Christmas is a social season, a time when you feel, or ought to feel, on good terms with your neighbour, and the "good will towards men" does not remain outside the portals of the garden. To the gardener it may mean work, the preparation for the house party, the decorations, and all the rest; but somehow the labour of it is lightened by the fact that it is for Christmas. There is no explaining it. It is just the spirit of the season which gets hold of the lord of the mansion, and extends its influence to the boy who crocks pots in the garden. Some people of the Scrooge type profess that they are not affected by it, and Christmas to them is just the same as another season. I do not envy them, for they miss a good deal of the pleasures of life; and, what is more unfortunate, they rarely contribute much towards the pleasure of those around them.

To the gardener Christmas has a very practical side. There is a good deal of work to be done to have the necessary plants, flowers, and fruit to hand; and before most people begin to think of the season at all preparations are commenced. I need not go into details—it would serve no purpose—for every gardener knows the routine well enough, and reminders would now be too late for any who are behind-hand. The forcing houses supply their share of the decorative material; but not all, for Christmas is not really a season for exotics and rare productions. The aristocratic Orchid finds itself by the side of the homely Holly branch or the simple Ivy, but it does not occupy premier place; and if one or the other had to be dispensed with it would not be the material that was associated with Christmas long before the productions of other climes found a place in British gardens.

In the way of decoration we all seem contented with one level at Christmas. When the evergreens are being cut for the adornment of the mansion the garden boy selects a few choice bits for the potting shed. That is his department. The unfortunate journeyman who finds himself on duty at Christmas looks after the bothy, and the place seems all the brighter for the few sprigs of berried Holly that are dotted about. It is the only time in the year that any attempt is made to decorate the establishment, and though the youth who does it may feel a little heavy-hearted when he sees his companions depart homeward, and thinks of his own solitude, the prospect is made more cheerful by the presence of the Christmas decoration. Mind you, I am speaking from experience. Follow the spirit a little further if you like. It prompts the labourers to shoulder a little bundle of green stuff from the common stock to make the cottage look a little "Christmasy," and no one says them nay. On the other hand, let it be said to the credit of many owners of country houses and gardens that they are moved by good old English feelings of generosity at Christmas time. The days of the wassail bowl and the mutual feasts of lords and retainers may be gone, but the spirit remains, and displays itself in divers ways. The English Christmas is one of feasting, and even the most dyspeptic amongst us give themselves a little licence at the festive season. There is feasting in the mansion, likewise in the cottage, for which the master is often responsible, through the joints of beef and other Christmas fare provided for those in his employ. It may not be much out of a wealthy pocket, the giving of these presents of food and clothing to the labourers and their families, but they think a lot of it; and it is something to look forward to as the festive season approaches.

We live in the days of trade unions and keen competition. Prices are cut very fine in the world's markets, and between capital and labour there is much jealousy and frequent bickerings, but not much sympathy, I am afraid. There is little of that good fellowship between master and men

that was once characteristic in trade, but, happily, it still exists in rural establishments where labour is employed on country estates and in private gardens. It is a pleasing sign to see labourers pass a lifetime under one employer, and in the same garden, contented with their lot, and in many cases better off than the man who is supposed to be protected by his union. The garden labourer does not figure very high in the world of horticulture, but he is a power nevertheless. It is his arm that wields the spade, without which little can be produced; and under many a battered hat there is a thoroughly horticultural mind. A good labourer is worth a lot to a gardener, but more to his employer. His wages are not high, his pleasures few, and any little perquisites that fall to his lot at the season when men feel more friendly disposed towards their fellows than usual, are not lost on the one hand, nor unappreciated on the other. It is at Christmas time that the old labourer (there are plenty of them), the father of the staff, who has passed on to the stage of leaf-sweeping and label-making, talks of the years that have gone and the changes he has witnessed. The season reminds him of the succession of masters who have ruled the establishment during his time, the gardeners he has worked under, and the young men who have passed in and out of the bothy during the period. He is proud to remember some—the best of them, perhaps—who have gone on and are now gardeners themselves; and the old worn-out labourer wonders what have become of others, then shakes his head, and doubts that they have not made much on't. Perhaps the old man will not see another Christmas, but that does not worry him; and he will hobble to the garden as long as his legs will carry him, conscious of the respect he commands, and with the knowledge that when he is called to lay aside his tools it will be with the satisfaction of duty done during long years of service. Reader, there are none of us who may wish for a better end.

Outside the garden proper, yet having a flavour of gardening, there is an order of things at Christmas which belongs entirely to the season. Go to the railway station at any great populated centre, and watch the loaded trucks of Holly Mistletoe, Yew, Ivy, and other evergreens that come in one after the other; and notice the bundles heaped up in great piles in the markets. You wonder where all the material comes from, and however it will be disposed of. It plays no part in the commodities of life, yet it represents considerable value, and is illustrative of that common sentiment to keep up the old-fashioned customs of Christmas. Follow the fortunes of the Holly and the Mistletoe, and you will see various little acts on the stage of life. Is it not the old spirit that prompts the presiding authority in the workman's home to count out her money for the Christmas cheer and leave a few coppers over for the little bundle of green stuff, just to make the house look seasonable? Consider in how many thousands of homes this is done, and you will have no need to wonder what becomes of the mountains of evergreens that are rushed into the markets at this season.

What a business it is, this preparation for Christmas! It affects us at home, in the garden, the nursery, the woodland, and the market; but the people of other climes, to whom Christmas may have but little meaning, have a large share in it. What would Christmas be without fruits—not only those grown at home, but the productions of the tropics—that are poured in, cargo after cargo, as the season approaches? The very thought of it all is stupendous, and the end is largely that desire to keep up the customs so dear to the hearts of British people.

And thoughts will wander backwards and forwards at this season to well-known figures in the gardening world who were with us last year, but have passed in the meantime to the great unseen. We shall look ahead as well, and wonder what the coming year has in store for us individually as the world of gardening rolls on. We shall think, some of us, of dear ones away out in Africa, where the war still drags wearily on, and wonder what sort of Christmas they are having. Their thoughts also, in their lonely vigils of the blockhouse, will be wafted homewards, and in imagination they will be in the old home, surveying the old garden, but without an idea of its dullness. But there will be real meetings as well of brothers, sisters, parents, children, relatives, and friends, who are moved with a desire to be together at Christmas time. While this thought, which is happy and seasonable, is with me, I will conclude, with the wish that every reader of the Journal, both in the garden and out, may spend Yuletide in a manner congenial to him.—H.

Landscape Gardening.*

(Continued from page 539.)

John Evelyn, scholar and philosopher, born 1620, died 1706, was the first in this country to treat gardening and planting scientifically. His grounds at Says Court, near Deptford, where he resided during a great part of his life, attracted much attention and admiration on account of the number of foreign plants which he reared in them, and the tidy order in which they were kept. The Czar, Peter the Great, was tenant of that mansion for about three months after the removal of Evelyn to another estate; and the old man was mortified by the gross manner in which his house and gardens were abused by the Russian potentate and his retinue. It was one of Peter's amusements to demolish a most glorious and impenetrable Holly hedge by riding through it on a wheelbarrow. We know that at the present moment there is a great Russian (the Grand Duke Michael) in occupation of the fine mansion and gardens of Keele Hall, Staffordshire, where to my knowledge there is also a very fine, double planted, high Holly hedge. It is sincerely to be hoped that this Grand Duke will be more respectful of Mr. Sneyd's hedge than was the eccentric Peter of Mr. Evelyn's.

Evelyn wrote his "Sylva" in 1664, which was a discourse of forest trees and the propagation of timber in His Majesty's (Charles II.) dominions. This work, aided by the King's example, stimulated the landlords to plant an immense number of Oak trees, which a century after proved of the greatest service to the nation in the construction of ships of war. For this purpose Oak and any other timber is now absolutely useless for naval purposes—timber giving place to iron—but if iron ships are so easily broken in two—the torpedo-destroyer Cobra, for instance—who knows but some genius of the Edison type may again in some way so revolutionise the fighting methods of war that Oak for ship-building purposes may again come into use? Be that as it may, we heartily acknowledge our gratefulness to Evelyn for being the spirited instigator of so many beautiful Oak woods being planted throughout the country, without which we fear much of the sylvan beauty we now enjoy would be absent, and the landscape of to-day might present a rather thin, miserable, and naked appearance. Again thanking Evelyn for what he has done for improving the beauty of our country, we might perhaps be allowed here to throw out the hint that we are at this moment sadly in want of another Evelyn to again stimulate some of our landed proprietors to do more planting and less depletion of their woods and groves by such severe annual thinnings which we so frequently see going on during the spring months of the year.

William Kent, an ingenious artist, born in 1685, originally a coach-painter, left that to study the principles of design, for which purpose he went to Rome and studied under some of the best masters; but as a painter, we are told, he never attained celebrity. It is as the inventor of the modern style of landscape gardening that we know Kent, and for which in his day he obtained great fame. He it was who first broke up the old uniformity of straight lines and corresponding parts, and threw wood, water, rocks, and glades into those beautiful forms presented to us by Nature, at once rendering graceful, pleasing, and attractive that which was before stiff and formal.

Launcelot Brown, better known as "Capability" Brown, another successful and celebrated landscape gardener, was born in 1705, and would be about thirty-three years of age when Kent died. Brown would therefore have an excellent opportunity of profiting by Kent's practice, and no doubt he also had read and studied Evelyn's Sylva very much to his advantage. Therefore we think we are right in giving ample credit to Evelyn, Kent, and Brown for initiating, or, we might say, uplifting, our present natural free and graceful style of landscape gardening out of the stiff, clipped, and balanced formalities of the Dutch school, which was so prevalent prior to their time in the pleasure grounds of the nobility and gentry of this country. Humphrey Repton, a private gentleman, born at Bury St. Edmunds in 1752, died 1818, had a try in various ways to make a living. Finally he adopted that of landscape gardening, in which he

* A lecture delivered by Mr. WILLIAM MILLER, F.R.H.S., landscape gardener and nurseryman, Berkswell, before the Birmingham and Midland Counties Gardeners' Mutual Improvement Association, November 4th, 1901.

obtained great celebrity. Repton is often favourably mentioned by Loudon in his "Encyclopedia of Gardening."

Paxton and Wren.

Sir Joseph Paxton was born in 1803, died 1865, and some account of his life, together with a portrait of him, appeared in the *Journal of Horticulture* for October 10, 1901. At Chatsworth, Paxton designed the building of the Great Exhibition of 1851, and also the Crystal Palace at Sydenham, as well as the grounds of that world-famed place, and many other public parks and private places besides. The science of landscape gardening received great impetus from the hand of Sir Joseph, from whose school we are indebted for some excellent men, amongst whom was the late Mr. Milner, who left behind him some remarkably good work. In Warwickshire he laid out and planted the gardens at Newbold Revel, at that time the seat of the late Edward Wood, Esq., and Wroxall for the late James Dugdale, Esq. At both of these places Mr. Milner left the mark of the master-hand. I have not the pleasure of knowing the younger Mr. Milner, but from what I have seen of his work and hear of him, I believe him to be a thoroughgoing chip of a worthy father.

Sir Christopher Wren, the famous architect, when owner of the Wroxall Estate, built the singularly constructed garden walls. These are a series of segments of circles, the concaves of which face southward, and, of course, the convex northward. The concaves when I saw them were planted with Pear trees. The idea of those recesses was no doubt to secure shelter and warmth, but I think the benefit would be more imaginary than real, as the morning sun would shine only on those surfaces of the wall which faced eastwards, whilst that facing the west would get none until well on in the day, and then the east face would lose it.

Nesfield.

Mr. W. A. Nesfield was chiefly known as the designer of the flor'd style of parterre gardens, of which art in his day he stood unrivalled. His designs were generally wrought out in Box, and when the lines were so finely drawn as not to admit of being planted, the figure was completed by the use of coloured gravel, and sometimes of broken glass. Many specimens of his work are to be seen about the country. It was Mr. Nesfield who in 1860 provided the geometric plan for the new gardens of the Royal Horticultural Society in Kensington Gore. His design was considered a very clever piece of work. It was as cleverly carried out, and when I was a much younger man than I am to-day, I had the pleasure of helping to lay down the plan, which has stood me in good stead ever since. It was the formation of those gardens, according to Mr. Nesfield's design, that so depleted the society's exchequer as to severely cripple them for years after. Of Mr. Nesfield a very good story is told. A friend asked him how he could continue making so many fresh plans and to always have them different in design. "Look here, friend—producing a very large book which was designs from end to end—when I have exhausted and adapted all these to suit my purposes I should by that time be a very old man." As Mr. Nesfield passed away years ago, I have often wondered to whom he bequeathed that famous book.

(To be continued.)

Notes from Dublin.

Despite the bitterness of winter, the dull green shoots of *Jasminum nudiflorum* are festooned with yellow flowers. One finds it in abundance against our suburban houses, and where our gardens have an odd wall whereon it can bloom. It is a very useful little shrub for decorative work. [It is used as a pot subject in the greenhouse at Kew.] Primulas are a strong feature hereabouts. *P. sinensis* is prominent; its huge foliage encloses the inflorescence, rendering the plants scarcely useful, but it is gradually giving way to the handsomer types, as *P. obconica* and *P. stellata*. Their almost recumbent foliage, combined with an abundant flower spike borne well up, lends to them a better display. As yet the new winter-flowering Begonias mentioned by "Wandering Willie" on page 541, are strangers. Our cultivators find Gloire de Lorraine indispensable, but the white variety is not much in evidence. President Carnot is radiant, and a superb plant is one mass of flower at Trinity College.

In the vicinity of Booterstown, a visit to the pretty little gardens of G. Drimmie, Esq., Bellevue, showed me a fine plant of *Cymbidium Mastersi*—about the best of the genus—a mass of flower. There were three spikes, each bearing a large percentage of blooms; whilst *Oncidiums* and *Laelias* were bursting into flower. Mr. J. Byrne, the gardener, had every reason to feel proud of his offspring.

Sparmannia africana is not finding favour. This fine old greenhouse shrub, whose white flowers are so pleasing, has to take the road of many old favourites that have been discarded. Despite the general tendency, some establishments retain it in many cases as a link in the chain of memories from younger days.—A. O'NEILL.



Angræcum Chailluanum.

Angræcums are essentially heat and moisture-loving Orchids, and with few exceptions—as, for instance, the Japanese *A. falcatum*—they require the warmest part of the structure devoted to such plants. Being epiphytal in habit, the majority require to be grown in baskets or on blocks of wood; but those of a vigorous habit, like *A. eburneum* and *A. sesquipedale*, are usually grown in pots with abundance of potsherds as drainage, good fibrous peat and sphagnum, or the latter alone; that moss also being employed when the small forms are grown in baskets or on blocks. The species we illustrate on the opposite page has been grown in English, Scottish, and Irish gardens for thirty years or more, yet it is not so well known as it might be. It was found in the Gaboon region of Western Africa by M. du Chaillu, and a plant sent by him to Kew first flowered in May, 1866. It is of comparatively small growth, with slender stems rarely exceeding a foot in height. The leaves are 4in to 6in long, and half an inch broad. The flowers are white, with long, tapering sepals and petals, and the yellowish spurs are 4in or 5in in length. The racemes, as depicted, are loose and drooping. This *Angræcum* succeeds in a basket, and likes the temperature of the East India or Cattleya house. It flowers in summer.

Miltonia spectabilis.

This is one of the finest of autumn flowering Orchids, and a favourite everywhere. The growth of the plants is not particularly strong, and care is necessary in its culture. In many cases the plants take on a yellowish tinge, but this is not necessarily a sign of ill-health. The roots are small and close clinging, consequently the compost may be made rather finer, but with plenty of small nodules of charcoal and crocks to prevent closeness. This is better suited to the roots than a very rough make up, such as is suitable for larger, more succulent roots.

About an inch of this material over good drainage is enough for small and medium sized specimens. During the growing season keep the plants close up to the light and water freely; in hot weather they may need attention twice daily. Even when at rest nothing like a dry régime is admissible; the growth must never shrivel, and the roots must be kept alive. The intermediate house, or where the Mexican *Laelias* flourish, will be found a suitable temperature for this fine species.—H. R. R.

The Week's Cultural Notes.

The temperatures in all departments should be kept as low now as is consistent with safety, and the weather must be carefully watched. In very cold mornings the readings will often be rather lower than one likes to see, and there is a disposition to push the fires on rather strongly. When the day is likely to be dull or stormy this is all right, but if it turns out bright, the sun is just gaining power by the time the heat is rising in the pipes; consequently the house soon gets overheated, and air has to be admitted freely to the destruction of a properly balanced atmosphere.

The aim should be to keep a thin but bright fire, as this may be easily pushed forward if necessary, or, on the other hand, damped down should the conditions warrant it. Waste of fuel is thereby avoided, and the plants are improved in health. No one should go to the fires who has not previously been in the houses and read the temperatures. As soon as the temperature has reached about 5deg above the night minimum a little air should be given on the top of the house, not sufficient to cause a draught, but just to let out the accumulated moisture, and this must be increased very gradually as the heat rises. It will seldom be necessary now to open the side lights.

Perhaps the most active of the labiate Cattleyas now is *C. Warneri*, or the spring-flowering labiate, as it has been termed. Rather more warmth than the Cattleya house affords should be given it now, and a light position not far from the roof glass in the East Indian house will be as good as any for it. Do not be led into repotting or pulling the roots about, for with this pretty species there is sure to be a flush of young roots after the flowers are past, and this is the time that should be taken advantage of for the operation.

Cleaning will be an important part of the work at this time of year, advantage being taken of the slack season for potting and other details to sponge the plants and clean the stages. In the cool house many spikes of *Odontoglossums* and others will be showing, and as during frosty weather slugs and small snails seem unusually voracious, it is well to be on the look out for them. A little cotton wadding around the spikes is a comparative protection, but constant searching at night must also be resorted to, and the removal of all litter or any material likely to harbour them.—H. R. R.

Seaside Planting.

(Continued from page 532.)

Coming now to evergreen trees, Conifers hold first rank, and of these the following are of proved excellence:—

Austrian Pine (*Pinus austriaca*).—Of dense habit and nearly as wide. Spread of branches as in height of stem, this tree stands pre-eminent for shelter in wind-swept places, whether inland or on the sea coast. It does not, however, stand out bravely to the sea blast, but the outer lines lean

reserved trees are in any wise prejudiced through crowding. In the vacancies Sea Buckthorn may be planted, the contrast between which—dense sombreness of the Pines and light silvery hue of the Sea Buckthorn—is quite charming, not the least advantage of the latter being its bearing cutting down, or in, to any extent, hence a suitable underwood subject for sea coast ground, though it does best when fully exposed to the “battle and breeze” of the ocean.

Where this mode of procedure is adopted it is a better plan to place the Austrian Pines 9ft apart every way in gardeners’ quincunx order, and the Sea Buckthorn alternat-



ANGRECUM CHAILLEANUM.

from the points whence come the fiercest and most prevalent wind, and this to the extent of several lines in depth or breadth of screen-belt. This is a matter that requires to be taken into consideration, and the idea of having the trees close together, good as it may be for nursing purposes and for producing straight stems, is fatal to the object in view. The lines should be not less than twelve deep in very exposed, rough, wind-tortured parts of the coast, and the plants quite 9ft apart every way, arranging them in a gardener's quincunx or “opposite vacancy” order. Thus the breadth of the screen will be 108ft, or 36yds.

Nevertheless, the trees must be planted 4½ft apart in the first instance, so that every other line and tree in line may be thinned out, and this must be effected by the time the lower branches of the trees meet, always before those of

ing between them in row and line. This is particularly advisable for the three outer lines—two of Austrian Pines and one of Sea Buckthorn, letting these grow as nature listeth, one or other, or both, forming a living wall, inside which many less withstanding of sea storm trees and shrubs may safely be planted. Not the least merit of the Austrian Pine is that of its succeeding in almost any kind of soil, from stiff clay to gravelly loam, but not thriving where waterlogged.

Corsican Pine (*Pinus laricio*).—This much quicker growing tree than the Austrian Pine has considerable power of resisting wind in exposed situations, and withstands the sea breeze fairly well; but its powers are not equal to the Austrian Pine in endurance, and does not generally succeed so well, though there are some examples to the contrary.

Besides, it is a much more open grower, though when given due basal room, it "feathers" well to the ground, yet never is as dense and sheltering as the Austrian Pine, though mostly keeping its head erect in the bleakest situations. It has the advantage, however, of being a valuable timber producer, a matter worthy of consideration in many cases.

Cluster Pine (*Pinus Pinaster*).—On sandy seaside tracts of ground this Pine has acquired great repute for withstanding the sea breeze. Nevertheless, the better tree, both for shelter and withstanding the sea breeze, is the form not recognised by botanists, but by nurserymen and planters, as *P. maritima*. This variety retains the lower branches intact far better than the type, and this is the greatest point in the matter of shelter-giving. It, like the type, will grow on sandy wastes, even thriving in pure sand apparently, and where the roots come in contact with the saline water. Of all trees both the species and variety are the most difficult to transplant on account of the long bare roots. It is, therefore, advisable to sow the seed where the trees are intended to stand—in deep, dry sand—when they do very well; or carefully transplant the seedlings when a year old, and only allow to stand in the nursery for another year, then removing and planting in their final positions.

Mountain Pine (*Pinus Mughus*), syn. *Pumilo*.—This densely branched tree, or that form of it known as *P. montana*, is a densely-branched subject, the upper branches ascending and the lower ones decumbent. It succeeds in exposed places, and is useful for afforesting tracts of ground by the seacoast.

Giant Arbor Vitæ (*Thuia gigantea* syn. *Lobbi*).—This, the White Cedar of North-West America, is a fine, graceful tree, and succeeds admirably on the seacoast, especially on the western side of the British Islands. It has the properties of transplanting well, even when of large size, and is never uprooted by the most severe storm.

Though not injured materially by the saline spray, it is not a subject fitted for withstanding the first onslaught of the sea breeze, yet suitable for planting on exposed maritime ground.

Large-fruited Cypress (*Cupressus macrocarpa*).—A tree of great beauty and quick growth, which succeeds on the east coast, and it follows on the southern. It, however, cannot be regarded as always reliable, and should not be placed in the front rank on the coast line, but kept somewhat inland.

Scots Fir (*Pinus sylvestris*).—Although not suitable for meeting the first brunt of the sea storm, this very hardy, fast-growing Pine battles bravely with strong and long-enduring storms, hence should have the shelter of Austrian Pine, when our native Pine does remarkably well near by the sea.

Monterey Pine (*Pinus insignis*).—The "remarkable" Pine is well suited for maritime planting, especially on the west coast, but though growing with unabated vigour in some wind-swept coast districts, it is uncertain in other localities, and ought to be given shelter. Then it stands the sea breeze in a most surprising manner, particularly on the south and south-western coast.

Swiss Stone Pine (*Pinus Cembra*).—A slow-growing, close, erect, symmetrical, columnar tree, which does fairly well near the sea, and splendidly when in the shelter of Austrian Pine. Severe and long-lasting storms under that condition have no injurious effect upon it, but it cannot endure the sea breeze directly in its face.

Atlantic Cedar (*Cedrus atlantica*).—Given shelter, and not in the full force of the saline blast, this very fine tree, closely allied to the Cedar of Lebanon, also does fairly well as a seaside tree. Similar remark applies to several of the Silver Firs, but they must be somewhat inland, and then on suitable soils they are simply superb, particularly the Cephalonian (*Abies* or *Picea cephalonica*), Silver Fir (*A.* or *P. nobilis*), and Spanish Silver Fir (*A.* or *P. Pinsapo*).

Of broad-leaved evergreen trees one only is pre-eminent—the

Evergreen Oak (*Quercus Ilex*).—For affording shelter in exposed and maritime districts this low, or middle-sized, tree has peculiar fitness, its densely-branched habit, stiff growths, and furnished with these to the ground when given due space, proving excellent break-wind. The most that force and frequency of storms effect is browning of the leafage more or less, and with this drawback it is otherwise commendable as a sea-storm break where few other trees succeed.—G. ABBEY.

(To be continued.)



A Veteran Exhibitor.

Among the many exhibitors at the late Bristol Show there occurred one name that has been familiar for a great many years as a grower of Chrysanthemums, and a successful exhibitor at the Bristol shows. I refer to Mr. J. Baylis, of Winterbourne. I could not say how many years he has so successfully shown cut blooms, but I can remember him at least twenty-five years, and at the time of my earliest acquaintance of him he was considered a dangerous opponent of at least one nurseryman grower famous at that time.

John Baylis, a small master quarryman, had only a very small greenhouse attached to his residence, and it has been a source of surprise to many that he should have found so much material, and that, too, of high quality, wherewith to wrestle with gardeners and nurserymen possessed of better appointed structures and convenience. In your report of the show "H. R. R." says a grand Mrs. Heale in his stand was perhaps the most perfectly modelled flower in the show, judged by the old standard of excellence. Time and infirmity now lay a heavy hand on this aged enthusiast, but his dogged perseverance and love of his flowers still stand by him.

It was only by the aid of willing helpers I observed that he was able to arrange his exhibits. The Colston Hall, grand though it is, inflicts great hardships on such a one. John Baylis has always been an admirer of the true incurved flower, and time was when he grew no other; but his later successes include Japanese varieties. His win with his stand of twelve must have justly raised a proud thought and a bright reflection of the many battles he has engaged in not only in Bristol, but elsewhere, at the November Chrysanthemum shows.—W. R. A.

Abbreviated and Badly Spelt Names.

At some of the recent Chrysanthemum shows much fault may have been found in the spelling of names of the flowers staged, and in some instances even there were no names at all given. At one foremost provincial show it is said that one of the judges, to mark his sense of the injustice of the practice, would have instantly disqualified the offending exhibits but for his colleague, who petitioned for a little leniency. One exhibitor was a winner of an important prize, and, in abbreviating his names, ran a serious risk of losing it. As a rule, societies protect themselves from this offence by a clause in their rules, and judges certainly will, if the practice continues, make examples of those growers who wilfully attempt to mislead the public by so doing. There were, in the cases under notice, an apparent wilful attempt to violate the bye-laws of the exhibition, because it is known that those responsible are not of such an ignorant class that they could not give a correct rendering of the names.

Exhibitions ought to be carried on as a means of enlightenment to the patrons who visit them, and there are many, gardeners included, who depend on the "show board" as a means of help in selecting sorts for future use. The aim of all exhibitors is to keep up to date as far as their means will allow them, and it cannot, I think, be regarded as anything less than mean for exhibitors, and especially successful ones, to make their aim one to mislead others.

A collection of unnamed blooms, no matter what their quality may be, are absolutely bereft of their value and interest to a show, and those suffering under bane of misspelt and abbreviated names are not much better placed. An honest exhibitor's aim should be to endeavour to help others by giving the proper names as far as it lay in his power to do so. The judge who was overheard to take such severe exception to the badly-named blooms at one show in question is a specialist of much prominence, and the probability is that such offences, if repeated, will ere long be made punishable by disqualification, a course that will lead the erring ones into better paths and more honourable actions.—EXHIBITOR.

[A most needful corrective, indeed, is the letter on the above subject. All the good nature and charity in the world would be required to bear down the sense of irritation, not to say wrath, and depreciation that involuntarily arises when one examines ill-spelt names of show collections of Chrysanthemum flowers, and even experienced exhibitors at the greatest shows fail frequently in naming neatly and correctly. If the names, as written by some of the greatest prizewinners, were printed in the gardening journals, a feature of amusement, and calculated also to afford astonishment, would thus be ensured.]

NOTES & NOTICES

The Season's Greetings.

With all earnestness; with satisfaction at the progress of events in our own line during another year; with confidence in the continued support of readers and writers; and with bright hopes for greater usefulness in the future, the conductors of "Our Journal" send out a New Year's greeting to all who have so well aided them in times now past. May happiness be the portion of all!

The R.H.S. Journal.

Briefly, we have to announce the publication of the Royal Horticultural Society's Journal (vol. xxvi., parts 2 and 3). This contains the Lily Conference report, and is otherwise crammed with most useful reading for gardeners and lovers of plant life and horticulture generally. We will fully review this volume immediately.

Royal Horticultural Society.

At a general meeting of the Royal Horticultural Society, held on Tuesday, December 17, forty-two new Fellows were elected, amongst them being the Dowager Lady Williams-Wynn, Lady Binning, Lady Harrison, Lieut.-Col. O. H. Oakes, and Captain Critchley, making a total of 930 elected since the beginning of the present year. The society's annual examination in the Principles and Practice of Horticulture will be held on Wednesday, April 23, 1902. Intending candidates can obtain a copy of the syllabus on application to the Secretary, R.H.S., 117, Victoria Street, Westminster. A stamped and addressed envelope should be enclosed.

A "Gardening Guide" from Kimberley.

"The Guide," a nursery and seed catalogue, reached us a month ago from Messrs. Charles Howie and Co., Kimberley, S.A. There are abundance of woodcuts illustrating vegetables and flowers. Of the latter there are Petunias, Pansies, Phloxes, Godetias, Marigolds, Larkspurs, Mignonette, Carnations, Cannas, and a host of other subjects, and also a wide selection of vegetables. In their introduction the firm remarks:—"It has been our endeavour to list only such varieties as we have confidence will suit our most trying climate, experience teaching us that notwithstanding the high opinion of the best seedsmen in the world, many kinds of seeds that do remarkably well in Europe, absolutely fail when tried in our dry climate. Seeds tested by the 'growing test' in Kimberley will grow anywhere in South Africa, and seeds that may answer admirably at the coast frequently fail completely when tried up-country." It is very pleasant to find such an industry progressing in the diamond fields.

Death of John Goode.

Mr. John Goode, the man who is credited with having built the first greenhouse in Chicago, away back in 1845, died at Melbourne, Fla., November 16, aged eighty-eight years. He was born in Enfield, near London, England, in 1813, and at an early age entered the nurseries of Cormack, Son, and Oliver, at Deptford, and followed this by a course at Earl de Grey's seat, under the celebrated Davie Douglass. In 1845 he went to America and Chicago, his first work being the laying out of the grounds of J. Y. Scammon, Esq., almost in the heart of the business district. Close by, too, he built Chicago's first greenhouse. About this time, also, he established the first nursery in the West, between what is now the Racine Avenue, Southport Avenue, and North Clybourne Place, then far outside the town. In the autumn of 1849 Mr. Goode, not being able to see the evidences of Chicago's future greatness, built a house-boat to carry himself and his family to new fields. The boat was frozen in for two weeks, and received a great deal of attention from Press and public during that period. After an eventful voyage down the Canal, Mr. Goode decided to pitch his tent in St. Louis, where he resided many years, engaged in landscape gardening. Among his works the laying out of La Fayette Park and the Fair Grounds stand conspicuous. In 1865 he returned to Chicago and entered into the florist business.

Chelmsford School of Agriculture.

Course II., Session 1901-2, starts on December 30, lasting till February 1, 1902, at the County Technical Laboratories, Chelmsford. The aim is to impart sound practical and theoretical knowledge on the principles of agriculture to young men entering this most important of all industries. Chemistry, botany, physics, biology, and "agriculture" (in its broad sense) are the heads of subjects upon which instruction is given.

Apple Scab.

Professor T. J. Burrill, of the Department of Agriculture of the University of Illinois, has announced that the parasitic fungus, usually called Apple scab, does not winter as supposed on the twigs of the tree, and therefore cannot be killed by spraying before the buds open. This is deemed a very important matter in practical orchard management, for success hinges upon its destruction and dependent on a knowledge of its life history. For best results the first application of the fungicide (usually Bordeaux mixture) should be made just after the leaf buds open.—("Canadian Horticulturist.")

Scottish Nurseryman's Golden Wedding.

Mr. and Mrs. David Stalker, Balmoral House, Elgin, recently celebrated their "golden wedding." Mr. Stalker, in the course of his long and active life has been successively head gardener to Sir J. W. Ramden, Lord Dufferin, and the Duchess Dowager of Norfolk. He afterwards became factor at Holme Island, after which he held for four years a similar appointment under Colonel Gould Hunter Weston, of Hunterston Castle, Ayrshire. Seventeen years ago he purchased the Nairn Nursery, and finally settled down in the nursery business, which, in the hands of himself and his son, has been exceedingly successful. The firm have had numerous orders from Royalty for fruit and ornamental trees, and their list of patrons include many of the leading noblemen and county gentlemen of the country. Mr. and Mrs. Stalker were the recipients of numerous valuable gifts on the occasion of their golden wedding. We wish them long life and prosperity.

The Pharmacy Act and Weed-killers.

The Poisons Committee appointed by the Lord President of the Council to inquire into what alterations may be expedient in Schedule A of the Pharmacy Act, 1868, sat at Whitehall on Tuesday, Wednesday, and Thursday, December 17, 18, and 19 respectively, Sir Herbert Maxwell, M.P., in the chair. The following witnesses were examined: Mr. Isaac Connel, secretary of the Scottish Chamber of Agriculture; Mr. W. Wynn Westcott, coroner for North-east London; Mr. J. W. Lytle, manufacturing chemist, Liverpool; Mr. T. V. Pettifer, manufacturing chemist; Mr. J. L. Major, of Messrs. Major and Co., Limited, manufacturers of disinfectants; Mr. James Cockburn, chemist, managing director of Messrs. F. Spite and Co., Limited, manufacturers of chemical and proprietary goods, including sheep dips, weed killers, &c.; Mr. W. Darlington, farmer and member of council of the Worcestershire Agricultural Society; and Mr. R. H. Smith, Sheffield, secretary of the Ironmongers' Federated Association. The next sittings of the Committee will probably be held in January.

Mr. J. A. Pettigrew.

In an appreciative note, the "American Florist" says of Mr. J. A. Pettigrew, "The eminent superintendent of Boston's park system (whose portrait also appears) is the acknowledged foremost man in his profession in America to-day. Chicago has never ceased to regret the folly by which his services were lost to her park department some years ago, and Boston is to be congratulated on the good judgment which secured him, and has so far supported him in his wise management of her public reservations. At the annual meeting of the Association of New England Park Superintendents at Hartford last summer, Mr. Pettigrew was re-elected president of that young and vigorous body for another year. It is a fortunate society that is privileged to draw upon such sterling material for its officers. Mr. Pettigrew stands for everything that is manly and honourable in American horticultural life, and the entire country looks to him and his co-labourers, the park superintendents of New England, for the best examples in the noble art which is destined to exercise an immeasurable influence for the future physical and moral well-being of the community."

The Gardeners' Royal Benevolent Institution.

The Prince of Wales has consented to become the President of The Gardeners' Royal Benevolent Institution, in succession to His Majesty the King, who is now Patron of the Charity.

Growing and Showing Tea Roses.

A symposium of information on this subject has been prepared by Rev. F. R. Burnside, Mr. O. G. Orpen, and Rev. Page Roberts for the National Rose Society, and has lately been issued. Lists of twenty-four and of twelve exhibition Tea Roses are provided, also short chapters on Pruning, Disbudding, Pests, Stocks, Manure, and Exhibiting.

Our Farm Page.

To those who delight in the work and scope of farming we would direct their attention to the interesting review of one of the large agricultural "annals," on page 589 of the present issue. There they will discover how greatly prized English farm stock (animals) are by the agriculturists and animal breeders in all parts of the world: and gardeners might well read the article we draw attention to, as tending to afford a truer notion of English agricultural importance and ideals in certain lines.

The late Mr. A. J. Stanton.

We learned with sorrow last week of the death of this gentleman, who for the past eight years has been editor of the "Mark Lane Express," a semi-agricultural newspaper. Mr. Stanton, who was a native of Northampton, was connected with the Press first in that town, and afterwards in Herefordshire, before going to London. He had the reputation of being a very capable journalist, and was exceedingly popular with all ranks of the profession, his genial and kindly manner making him a general favourite.

Edinburgh Seed Trade Assistants.

At the recent annual dinner of the above jovial and numerous body of men, in proposing a toast to the "Seed Trade Assistants," Mr. Bieberstedt invited the kindly co-operation of employers on behalf of the assistants as a body, believing that this would greatly benefit all concerned. Responding, Mr. T. Alison suggested the formation of an association of the assistants in the seed trade, with the view of improving their position, if from no other than an educational point of view. They were a fairly prosperous body of young men, and had not found it necessary to resort to any extreme measures in their business relations with their employers, but there could be no doubt that they would be none the worse of being thoroughly organised. Query: Why is it that we do not hear of "annual dinners" having been held by the seed-trade assistants of other large centres?

Death of an Edinburgh Seedsman in New York State.

It is with deep regret that we learn from "American Gardening" of the death of Mr. Alexander Waite, which occurred under rather tragic circumstances at the residence of his brother, Mr. W. H. Waite, superintendent to Samuel Untermeyer, Esq., Greystone, Yonkers, N.Y. Deceased is a son of Mr. Alexander Waite, late gardener at Manderston, Duns, Berwickshire, Scotland, and was resident in Edinburgh for over eleven years. He was employed in Messrs. Peter Lawson and Co.'s, seedsmen, Edinburgh, during that period, and had worked his way step by step to a responsible position in that establishment; being of a cheerful disposition he was liked and respected by all with whom he came in contact. Being desirous of gaining insight in his profession, he went to America recently and obtained a position in Messrs. Peter Henderson and Co., seedsmen, New York. The manager in that firm writes that his death cast quite a gloom over the establishment, and although only ten weeks there he had shown qualities which endeared him to all with whom he came in contact. He went out from New York on Wednesday evening, November 27, intending to spend Thanksgiving Day with his friends at Greystone, and retired to rest in his usual good health and spirits. In the room he occupied there was a gas stove with two stopcocks, one at the stove and another where the rubber tube connects the gas pipe. He made the lamentable mistake of turning the stop-cock next the stove and leaving the other open. When his room was entered in the morning he was dead, death resulting from asphyxiation. Much sympathy is felt for his relatives both in America and in Edinburgh, especially his parents, who are well advanced in years, and to whom this is a heavy blow.

Trade Note.

Messrs. Brinkworth and Sons, Potato growers and shippers, fruit merchants and commission agents, inform us that they have changed their address (too late for "Directory" this year) from Winchester to 50, High Street, Southampton.

Big Cabbages.

There was a very keen competition in the Cabbage section at the recent Scottish National Show. The offer by Mr. John Gillies of £100 in Challenge Cups and cash prizes for the best Cabbages grown from plants supplied by him brought out a large entry in both the classes set apart for this competition. The judges did not go entirely by weight, as there was also quality to be considered, and besides, some of the Cabbages had thick heavy shanks attached to them, while others were trimmed close up to the bulb. The first prize Challenge Cup, value £30, to become the property of any winner for two consecutive years, and £10 in money; second prize, £10; third prize, £5, were awarded as follows; 1, T. W. Turnbull, Wark, three Cabbages, 79lb; 2, T. M. Skirving, Niddrie Mains, three Cabbages, 77lb; 3, T. W. Turnbull, Wark, three Cabbages, 77lb; so that 233lb, or over 16½st for nine Cabbages, is surely a very respectable weight.

Dinner to Messrs. Hurst and Sons' Employees.

A very pleasant function was fulfilled on the evening of the 19th inst., when Mr. N. N. Sherwood, the head of the house of Messrs. Hurst and Sons, of 152, Houndsditch, E.C., entertained at dinner, in the Venetian Chamber, Holborn Restaurant, the employes of the firm and some personal friends. Mr. Edward Sherwood, the second son of Mr. Sherwood, was also present, and assisted in the musical arrangements. Over 100 were present. Mr. A. Wolton proposed "Success to the Firm," and briefly sketched the circumstances of its formation and its continuous development, and spoke of it as being at the head of the wholesale seed trade. On rising to reply, Mr. Sherwood was warmly greeted. He stated that he entered the house, when a lad, thirty-nine years ago, when the business was carried on at 6, Leadenhall Street, and in the lifetime of Mr. William Hurst, sen., the founder of the firm. At that time the office staff consisted of three persons—the cashier, ledger clerk, and himself; and it fell to his lot to enter the orders in the day book. The seed catalogue of that day was a sheet of four pages; now it was a document of some 100 pages. At that time they thought fifty letters a day a large post; now it averaged over 500. When he joined the firm they made long days, working till ten o'clock at night, and having barely ten minutes in which to get their dinner. They did work, said Mr. Sherwood, in those days. He had himself a good share of hard work during the past thirty-nine years; but he was blessed with two excellent sons who were now taking an active part in the business, and he was looking forward to a time of comparative ease. He had also an excellent staff, several of whom had been in the firm for many years, men whom he could fully trust. So he felt justified in looking forward to a life of greater ease in the future. Numerous other toasts followed.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick—height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1901. December.										
Sunday ...15	N.N.E.	deg. 33.0	deg. 31.5	deg. 36.8	deg. 32.5	Ins. —	deg. 39.9	deg. 43.3	deg. 46.5	deg. 26.7
Monday ...16	N.E.	36.0	33.9	41.2	32.0	—	38.1	42.8	46.5	25.6
Tuesday ...17	S.E.	24.5	23.6	41.4	23.3	—	37.2	42.1	46.3	19.6
Wednesday 18	W.S.W.	33.1	32.0	41.0	24.8	—	36.7	41.6	46.1	25.4
Thursday 19	S.W.	28.6	28.2	39.5	25.5	—	36.4	41.2	45.9	18.6
Friday ...20	N.W.	27.9	27.0	34.5	24.1	—	36.0	40.8	45.6	19.0
Saturday 21	N.W.	33.0	31.8	34.0	27.8	—	35.9	40.5	45.3	26.3
MEANS ...		30.9	29.7	38.3	27.1	Total. —	37.2	41.8	46.0	23.0

Another week of dull weather, with fog and cold biting winds, and a low temperature generally.

Westerlea, Edinburgh.

Of the many beautiful gardens in the suburbs of Edinburgh, this is, without doubt, one of the most delightful, occurring, as it does, a fine southern exposure on well elevated ground, and commanding a charming view of the long chain of the Pentland Hills. The house is a modern building of fine proportions, and is the property of J. J. Cowan, Esq. The gardens and grounds have been, for the past eight years or so, under the care of Mr. Alexander Proctor, and have been maintained in the highest stage of good gardening. Stretching east and west, in front of the house, is a fine, broad, gravel walk, while to the south, and under a terrace from the walk-level, is a nicely designed flower-garden, the beds of which, at our visit, in late October, had been filled with their winter occupants. A varied shrubbery borders this flower-garden, being finished off at the west side by a fine walk, overhung with Roses on

to the beauty of the house. A very good plan adopted by Mr. Proctor for such a house as this is that of having the hot-water pipes, that are under the stage, hidden by virgin cork. This is carried out by first facing up the pipes by a strong board, leaving a space of 3in or 4in for soil, the front being built with cork, and covered over with *Ficus repens*, and having little pockets for Ferns to give a finished effect.

Leaving the conservatory we pass along the north side of a neat little kitchen garden, and in spite of the great difficulties against pests in the soil, some good winter crops were to be seen. Dahlias, just blackened by the early frost, and a border of Chrysanthemums bordered this top walk, and when seen at their best must have made a fine show. Entering the range of glass houses from the east end, the first is a fine Peach house, where we found, instead of wires along the rafters, espaliers, that are placed about 4ft apart at right angles to the length of the house. This gives equally as much space for the trees, and the object is that it does



WESTERLEA, EDINBURGH.

wire espaliers. Immediately under the terrace there is a long border, furnishing a grand display of early flowering Chrysanthemums.

From the Rose walk we return to the main walk by a flight of steps, and find at the north-west side of the house a large-sized croquet or lawn-tennis green, with pretty shrubbery, herbaceous flower borders all round. Attached to the east side of the house is a very attractive and spacious conservatory, which can be entered by a side door, and we find ourselves in a pretty corridor, the walls and roof of which are nicely covered with such climbers as *Streptosolon Jamesoni*, *Tibourciana* (*Lasiandra*) *macrantha*, *Smilax*, Ivy-leaved *Pelargoniums*, and *Heliotropes*. By a cross passage from this, and down a few steps, we reach the conservatory proper. This is a splendid show-house, and at our visit was gay with Chrysanthemums. The floor space is left clear in the centre, and is finely laid with red-coloured cement, which gives it a warm and clean appearance, and bareness is avoided by placing about a few nice specimens of *Kentia Belmoreana* and *K. Fosteriana*. The presence of a chair or two makes it a delightful smoking-room; some fine climbers and pretty hanging baskets add

not obstruct the light from those on the back wall, at the same time not interfering very much with the space of the border. In another vinery we were delighted to find a grand batch of Chrysanthemums grown to my own taste, that is dwarf, and all under the eye. Mr. Proctor adopts this plan with his 'Mums throughout, with most satisfactory results; all are grown on the cut-back principle. Cuttings are inserted during November, or as early as they can be got, and kept in cold frames so long as weather will permit, and are taken in for six weeks or two months, while again in March they are potted-up and put out to cold frame. They are cut back about May. I give a list of some of those grown by Mr. Proctor, all of which were very fine, and some were more than 4ft in height, many of them 3ft and under. The best were: Commandant Beusset, Robert Powell, President Borel, Autumn Bride, Charles H. Curtis, La Triumphante, Yellow Mrs. S. C. Probin, A. M. Ring, Wm. Holmes, Madame Capitante, Vivian Morel, Mrs. Ritson, Colonel Chase, Colonel W. B. Smith, Madame Fullet, Mutual Friend, R. Hooper Pearson, Louise, Lady Randolph, and Edwin Molyneux.

In two of the vineries the gardener has been engaged

for the past year or two in rearranging the Vines so that he may have the one entirely filled with Madresfield Court, and the other with Muscat of Alexandria, a variety much appreciated by Mr. Cowan. The plan adopted is to plunge one-year-old pot Vines in the border and inarch them on the old rods; by this means a remarkably strong cane is secured in one season, and much more successfully, it is believed, than if the young Vines had been planted afresh. In a nice span-roofed stove were to be found a fine lot of Palms, Ferns, and other foliage plants under good cultural treatment. Amongst the Ferns were very fine examples of *Goniophlebium subauriculatum*, *Davallia bullata*, also *Pandanus Veitchii*, *Cocos Weddelliana*, and on the roof *Clerodendrons*, *Bougainvilleas*, *Cissus discolor*, *Asparagus Sprengeri*, *Allamandas*, *Stephanotis*, and such other things. In a small Tomato house were found the remnant of what had been a successful crop, also a fine batch of *Begonia Gloire de Lorraine*, and winter flowering Zonal Pelargoniums. For compactness, orderliness, and general tidiness, the place is much to be commended, and we wish Mr. Proctor, who leaves soon to fill a similar position at Gelston House, Fifeshire, every success in his new appointment.—W. D.

[Since the above was put in type, Mr. Proctor has assumed his new charge.—Ed.]

Flowering Trees and Shrubs.

The following notes were written for publication in May, when the shrubs and the trees were full of blossoms; but they will be more useful at this, the planting season, when the absent beauty and fragrance of the flowers are apt to be forgotten by those who so much admired them in the spring time.

Of evergreen shrubs that flower during May, the *Aucubas* are interesting, from the male varieties producing their inconspicuous yellow and purple flowers, with the anthers laden with golden dust, which, wafted by wind or other agency, fertilise the blossoms of the female varieties to a considerable distance around, and both to windward and leeward; whilst the yellow blotched and mottled foliage contrast effectively with the beautiful scarlet berries of large size. The old *Aucuba japonica maculata* still holds foremost place for general purposes.

Sweet Bay (*Laurus nobilis*), often passed because of its inconspicuous yellowish flowers, is interesting on account of the volatile oil secreted in the glands of the flowers, as well as in the bark and leaves. The plants are dioecious, and where plants of the two sexes occur, seeds are often produced. It is the Victor's Laurel, called *Daphne* by the Greeks, and was consecrated to priests and heroes, and used in sacrifices.

Who notices the flowering of the Box (*Buxus sempervirens*)? That the flowers are unisexual, monoecious; male flower, calyx of four minute segments, stamens four, inserted under the rudiments of a pistil; female flowers singly, at the top of groups of male ones? Broom—Cream coloured and white Portugal (*Cytisus pallidus* and *C. albus*) are charming, and lighten up the border wonderfully, but they are now (May 6) only peeping.

For glow the Berberies are most conspicuous. Darwin's (*Berberis Darwini*) for its wealth of rich golden flowers, and the Holly-leaved (*B. Aquifolium*) for its profusion of charming yellow blooms. Brilliant as these are, they pale in presence of Double Gorse (*Ulex europæus flore-peno*), the plants being simply beautiful.

In deep green foliage, smaller but shining, as common Laurel, not any shrubs surpass the Phillyreas or Alaternuses. The Narrow-leaved (*Rhamnus Alaternus angustifolia*) and Mead's (*R. A. Meadi*) have pretty white flowers produced from the axils of the leaves of the two-year-old.

Laurustinus (*Viburnum Tinus*), striving oft during the winter to flower, and did fitfully, has reserved its charms for the merry month of May, and is more laden with its charming heads of white flowers than I have ever seen, being literally all in white sheet.

Passing to deciduous trees and shrubs, first and foremost stand the Snowy Mespilus (*Amelanchier canadensis*) (*Botrya-pium*). As a standard, worked 6ft high on Mountain Ash, it is one of the most effective of all white flowered plants, and produces pomes or fruits that are very refreshing from the juice.

In pale yellow drooping flowers, commend me to *Berberis dulcis*, though *B. Jamiesoni* has still paler, or lemon coloured flowers, both being splendid.

The double Chinese Cherry (*Cerasus serrulata*) with its pale white or rose-tinted double flowers, disposed in fascicles, is particularly fine, and so also is the double Gean (*C. Avium multiplex*), white and very showy. They are best grown as standards.

As a shrub with showy yellow or orange coloured flowers, *Kerria japonica* is very elegant, having a graceful habit, surpassing the double form (*K. j. flore-pleno*), the single flowers being very pleasing, and the plant is nearly always in flower.

The double flowered Sloe (*Prunus spinosa flore-pleno*) has been, and is, all white, and the crabs are lovely in bud. Conspicuously in flower is *Pyrus spectabilis* and *P. floribunda*, especially the form *atro-sanguinea*.

Flowering Currants enliven the shrubbery famously. The "cake" is taken by the very charming Beaton's or Gordon's (*Ribes Beatonii* or *R. Gordonianum*), a cross between *R. aureum* and the more showy *R. sanguineum*, and intermediate between the two in all its characters. For show the flowering Currant (*R. sanguineum*) holds its own, though the sub-variety, *atro-rubens*, has deeper coloured flowers, but they are smaller, as also are the racemes. The variety *album* is particularly floriferous this season, and the promise of other good things to come is singularly hopeful, though only one evidence of May blossom has as yet been forthcoming.

Against walls the Nude-flowered Jasmine (*Jasminum nudiflorum*) has been remarkably profuse of flowers, and these individually large—larger than I have ever noticed them before, and now the Japanese Quince (*Cydonia japonica*), with its deep scarlet flowers, is very beautiful. It certainly is one of the most desirable shrubs in cultivation, whether as a bush on the open lawn, trained against a wall, or treated as an ornamental hedge plant, and of it there are several varieties.—ARBORICULTURIST.

Chemical Dressings for Peach Borders.

The trees are best pruned and dressed after loosening them from the trellis. Cut out weak, attenuated branches, and where feeble thin them well, leaving sufficient of last year's growths for bearing, with space between them for training-in those intended to displace them. Thoroughly wash the house and trees with soapy water, and, if necessary, apply an insecticide. Aphides, red spider, thrips, and scale lurk about the trees in some form, ready to become active, and multiply when forcing operations are commenced. Secure the branches at once to the trellis, leaving space in the respective ligatures for the swelling of the branches and shoots. Take away the loose surface soil down to the roots without disturbing them, and supply good turfy loam in lumps from the size of a nut to an egg, with an admixture of about a fourth of well decomposed manure, not covering them more than two to three inches.

If the trees are disposed to make long-jointed wood, it is advisable to avoid nitrogenous manures, also potassic, especially in nitrate form, and supply bonemeal, which will furnish phosphoric acid or phosphate of lime, tending to promote sturdier growth; and where there is a deficiency of lime or tendency to sourness in the soil, sulphate of lime or gypsum may be used advantageously as a top-dressing. Apply it at the rate of 7lb per rod; or basic slag phosphate may be used at the same rate. These substances are useful in the case of gummy affections, with equal proportions of steamed bonemeal and gypsum, and applied at the rate of half a pound per square yard at the time of pruning the trees in autumn or early winter.

This will give time for the elements supplied to act on the soil and become available as food, with others acted upon, by when the trees start into growth. On the other hand, where trees have made too little wood, and are more prolific of fruit than desirable for attaining a good size, the borders may be dressed with a combined phosphatic, potassic, and sulphatic manure. Carefully examine inside borders and supply a thorough soaking of water if dry, as dryness at the roots will cause the buds to fall later on. Keep the houses as cool as possible, so as to insure complete rest.—S. A.



Araucaria imbricata.

It will interest "H. M.," page 524, to know that plants were raised at Floors Castle, Kelso, N.B., from seeds from a cone brought from the gardens at Duns Castle, Berwickshire, N.B., which I expect by now will be good-sized plants.—W. C.

Keeping Muscats.

Having seen the poor condition of many Muscats at several of our November shows, it has led me to write of my method of treating this Grape when ripe. I have seen whole houses in the same state as the shrivelled berries we often see on the show-board at this season. This is a state often brought on by wrong treatment to the ripe fruit. Perhaps the greatest secret in keeping Muscats is to have the fruit perfectly and properly ripened, for it is useless trying to keep any Grape unless we have finished bunches at the outset.

When one has fruit nicely ripened it is sheer nonsense to keep up a high temperature with fire-heat, which is, only too often, done. All the fire heat that is required is a circulation of warmth in the pipes during the daytime, when an abundance of air can be admitted, allowing the pipes to cool down at night, so that there is sufficient heat to keep the temperature falling below 40deg. In damp weather it is necessary to use more firing, but then only enough to expel the damp is wanted. The borders need carefully examining frequently to keep them in a nice medium condition. If we attend to these few details we need have no fear of Muscats not keeping.—T. W. B.

Gardeners and Estate Agents.

I have been much interested in the letters on "Gardeners and Estate Agents," appearing in the Journal. I am now a gardener, but for many years worked under my father, a large farmer and land agent, so may claim to know something on both sides, and I have often had to keep the peace between gardeners and bailiffs, a much more difficult job than between them and agents. I am convinced it is the old tale, "six of one, half a dozen of the other," and very often it is the gardener who starts the trouble. By all means let him refuse to allow any interference with his men, or his methods of work; he is responsible for the result and must follow his own plan, and if the agent is a gentleman there will be no friction on this score. Let him thoroughly understand how the money matters are to be arranged and loyally do his best to carry them through, and if he fails he can explain it honestly before his master and try to get things improved.

But it is in the smaller matters most trouble lies. Turf and manure, to take two subjects already mentioned, are fertile causes of friction. We must have both; but is it necessary to pick a special bit of turf, the removal of which the agent may consider an eyesore, or which a tenant may object to having cut? Again, manure; is it not possible to tell the agent we shall want a certain number of loads before a certain date, giving him plenty of notice, and telling him to load it on frosty mornings or in bad weather, when otherwise the teams would stand idle? My experience is that nine times out of ten we gardeners want it in a hurry, and ask for it in the thick of harvest, or seed time, or some other equally inconvenient season. Small things like this, that the exercise of a little tact and consideration on the gardener's part would prevent, start the sore, and, human nature being what it is, the bailiff does not forget it; the squabble comes before the agent, and gives him an excuse to interfere.

What I think a much juster complaint with gardeners is the amount of odd work they are expected to do outside the garden. The Lincolnshire saying is that a gardener must know everything about "cows, pigs, poultry, boots, babies, and chimneys." And so much the better for him if he does. He and his men are always at hand, and consequently are relied on in an emergency; but it is not reasonable that he should be expected to find men to shovel coals, clean windows, &c., &c. If he has labourers or men engaged for these odd jobs and to "put in their time" in the

garden, well and good; but garden apprentices and journeymen are engaged to be gardeners, not to do unskilled labour, and naturally resent it and give the chief a lot of trouble. Generally in these cases it is pure ignorance on the part of the agent or employer, and a deliberate wish to be annoying on the part of the bailiff or steward. Any work he does not like, or that is a trouble, goes by with the remark, "Oh, I have no men for that; go to the gardener," and the gardener, rather than his employer should be inconvenienced, has it done. If the annoyance is constant I advise him to go to the agent or his master and point out the false economy of putting men at 18s. to 25s. a week to work which can be done by an ordinary labourer.—NORTH LINCOLN.

Christmas on Duty.

The above heading set me thinking of a few Christmas Days spent in the bothy in south, east, and north of England. The good people of the mansion do not as a rule know or care much about the inmates of the bothy. Such has been my experience, except in one place, where, some ten years ago, I was general foreman. There the lady believed in making all her employes as happy as she could on that day. It would have done "An Old Boy's" eyesight good, I venture to think, Mr. Editor, to have seen a journeyman at each end of the garden handbarrow, with the foreman bringing up the rear. They had to be at the kitchen door at 1 p.m. sharp to receive the good wishes of the lady and the following: 16lb or 18lb of beef (boiled) and vegetables galore, not forgetting a good plum pudding—with white sauce to pour over it! and all smoking hot; also two mince pies each, the same number of Oranges and Apples for each bothyite. That was the bothy Christmas box. I think, Mr. Editor, you will agree with me in thinking that was a rightdown good one, too. There was not much time lost before that beef and pudding began to diminish. They were not all saints in that bothy, but I for one enjoyed myself without that "drap o' something short." A little kindness like the above serves to make bothy life a bit brighter and happier on the day of all days in the year.—E. T.

Wanted,—for Ireland.

The interesting, instructive, and racy article under the title of "Wanted—for Ireland," which appeared in your issue of December 12, afforded me much food for thought. The writer has an appreciative knowledge of the splendid work carried on by the Irish Agricultural Organisation Society, under the guidance of Mr. Horace Plunkett. The Sister Isle has certainly stolen a march on us while we slept. Now we are beginning to awake, but have only reached the stage of rubbing our eyes. When shall we open them wide enough to see the seriousness of our position? The British farmer still loves to wrap himself in his splendid isolation. In Ireland the farmers, through the co-operative movement, have been taught that sympathy, mutual trust, and helpfulness spring from such association. "Self-help is all help." It is only thus that the solution of many of the problems surrounding agriculture can be successfully solved.

The farmers must recognise that in co-operation the hope of the future rests. There is no other true course. First make an effort to arrest the decay. Show the State that we are worthy of State aid. In every other country the manner of beginning has always been the same, self-help preceding State help. People call out for Acts of Parliament to bolster up a decaying industry; but the State wisely and properly says, "Show us first of all that you can help yourselves, and then, but not till then, we shall be satisfied that in helping you we are not throwing away good money."

One of my principal reasons for writing this letter is to try and dissipate the ignorance that obtains of the existence in England of a sister organisation to the Irish organisation founded by Mr. Plunkett. The society with which I am connected is doing most successful work, and on similar lines. It will interest your readers to hear that one of our affiliated societies is situated in the fruit district of Worcestershire—the Far Forest. It has for its hon. secretary the Rev. G. F. Eyre, who takes a great interest in all matters co-operative. The objects of the society are many and varied, ranging from the purchase of farm requirements to the grading and packing of fruit, eggs, &c. The society was only registered in October last, but already it has made considerable headway. If any of your readers would like further information as to the Far Forest Society, or leaflets dealing with the work of the co-operative movement as conducted by the Agricultural Organisation Society, I shall be only too pleased to comply with the request.—J. NUGENT HARRIS, Secretary, Dacre House, Dacre Street, Westminster, S.W.

Children, and Flowers.

Those who are grown old, and who are devoted to gardening and flowers, can nearly always ascribe their fidelity in this direction to the training received in the days of youth and adolescence. The child—the boy or girl—the youths and maidens who are properly encouraged by parents or guardians to a knowledge of the wonderful mystery and interest of plant life, and to tend in watchfulness to the simple needs of the flowers, never quite forget the peaceful pleasure and the rewards a garden will give to those who truly love it. Not even a busy life in business or other calling can crush out the remembrance of the achievements in the little garden plots around the old home, and thus it follows that the man from dim and dusty city offices, or from the exactions of laboratories, of class-rooms, and of courts of law, again invariably returns in the evening of his days to pursue the past hobby of boyhood with an interest manifestly strengthened.

The little child seen kissing the flowers in the picture on this page has been taught to love them by her father and mother, Mr. and Mrs. Bygrave, of The Gardens, Rous Lench Court, near Evesham, in Worcestershire. Mr. Bygrave writes saying, "The photograph is a snapshot of my daughter, aged eighteen months, caught in the act of kissing the flowers. We have taught the child to love the flowers, and not to pull them." We congratulate Mr. and Mrs. Bygrave in having such a beautiful little darling, and if she is typical of Worcestershire babes then rich must that county be. Long may she be spared, and long may her love for flowers and things helpless continue.

Societies.

Birmingham Chrysanthemum Society.

The annual dinner was held at the Colonnade Hotel on the 19th inst., Mr. W. B. Latham in the chair, and Mr. Walter Jones vice-chairman. The postprandial proceedings were of an enjoyable character, and following the customary loyal toasts, the chairman, in the course of a felicitous speech, announced that notwithstanding a considerable falling-off in the pecuniary receipts at the recent exhibition held in Bingley Hall, the committee were in a position to justify the formulating a schedule for next year's show. Responding to the toast to the "Special prize donors and the non-competitive exhibitors," Mr. Robert Sydenham voiced the satisfaction of those thus concerned regarding the treatment accorded them by the committee; also that he himself proposed to continue to support the society as far as lay in his power.—G.

Birmingham Gardeners' Association.

A dissertation upon Conifers, illustrated by cones, was the subject propounded by Mr. W. Gardiner, Harborne, Birmingham, before the fortnightly meeting, on the 16th inst., at the Athletic Institution, presided over by Mr. W. B. Latham. The collection of branchleted cones, comprising as it did upwards of sixty species, besides branchlets of numerous other species, was pronounced by the chairman as the finest collection he had ever seen exhibited by one person. The exhibitor remarked that he was deeply indebted to the managers of two or three of the most notable Pineta in England for the kindness in favouring him with the chief portion, and containing as it did several rare kinds, and the remainder by local friends. In addition to describing the species, the lecturer briefly disquisitioned on the relative position the Coniferæ occupied in the arboreal kingdom; also their classification and nomenclature of some of the genera. The principal portion of the specimens exhibited consisted of such as those of Pines, Picea, Sequoias, Cedrus, Cryptomeria, and Cupressineæ; but the Silver Fir (Abies) section were, unfortunately, absent, owing to the difficulty in obtaining them so late in the year, and their destruction by squirrels and birds. A hearty vote of thanks was duly accorded Mr. Gardiner for his interesting and instructive exposition. Mr. Latham exhibited a collection of dried foliage of several of the New Zealand and Phillipine Islands Coniferæ, such as the Dammaras (Agathis) and Dacradiums Franklani and Cupressinum, and a cone of Araucaria Bidwilli preserved forty years ago.

Waterford Horticultural Society.

Through the kindness of Mr. D. Cantwell, of Terminus House, Waterford, we are informed of the annual general meeting of the above society, which was held on Friday, December 13. The hon. treasurer's statement of accounts shows a credit balance of £7 7s. 8d., including £1 4s. 1d. carried forward from last year. It will be seen that the society is not in a position to at present undertake the liability of a summer show. The Chrysanthemum show held on November 8 was very successful. The committee would suggest the advisability of the Council of the Royal Horticultural Society being approached on the subject, with a view of inducing them to allow an interval of a day between their shows and that held in Waterford, which would afford competitors at Dublin time to arrange for patronising the Waterford Show. Mr. W. G. D. Goff, Glenville, having again won the silver cup for the best group of Chrysanthemum plants, it has now become his property. To enable the society to offer a new one next year, he very kindly sent a cheque for £10. The display of field crops, as in previous years, played a prominent part, the number of entries



"WE HAVE TAUGHT HER TO LOVE THE FLOWERS."

being very large and exhibits of fine quality, keen competition resulted for the silver cups offered by Messrs. W. Power and Co. and Mr. Thomas Whittle. Messrs. Glennie, of Curraghmore Farm, and Mitchell, of Bessborough Farm, were the judges in these classes, and their judgment proved faultless. Messrs. M. Saunders and Sons, Friar's Walk Nurseries, Cork, staged an exceptionally fine collection of Apples and Pears, over seventy different varieties, which attracted a great deal of attention, and for which the committee had much pleasure in awarding a special certificate. Messrs. Isaac House and Son, of Bristol, also had a stand of the latest and best varieties of Violets, both double and single, which were greatly admired. Some discussion followed, after the report had been adopted, as to filling the posts of secretary and treasurer. These have been very onerous posts, and now that the society has reached smooth waters, Mr. Richardson, the late treasurer, and Mr. D. Cantwell wished to retire and enjoy a rest. Mr. Cantwell had, however, to undertake the secretaryship for another year, but Mr. Richardson was eventually succeeded by Mr. J. W. Lapham. The officers as elected are:—President: Raymond De La Poer, J.P.; vice-presidents: The Mayor of Waterford, W. G. D. Goff, J.P., J. N. White, J.P.; Alexander Nelson, J.P., D.L.; T. W. Anderson J.P., D.L.; committee: W. H. Fennessy, W. Gallwey, J.P.; H. Innes, J. A. Power, R. Macbeth, James Moloney, J. A. Oakshott, Frank Power, John Strangman, W. Taylor, A. White, W. Richardson; hon. secretary: D. Cantwell, Terminus House, Waterford; hon. treasurer: J. W. Lapham. We wish the society continued success in the years to come.



Hardy Fruit Garden.

CLEANSING FRUIT TREES.—As a general wash for fruit trees in winter a caustic soda and potash solution is one of the best of the numerous insecticides which are recommended. This solution is made by dissolving $\frac{1}{2}$ lb each of caustic soda and crude commercial potash in 5 gallons of hot water. The mixture must be applied in a mist-like state over every part of the trees, and this is best effected by using a suitable spraying apparatus, which will economically distribute the insecticide over the trees and bushes. As this particular preparation is of a burning and caustic character the operator should wear a pair of thick gloves to protect the hands from injury. If well applied, so as to reach every part of the trees, this insecticide is excellent for destroying all insect eggs, red spider, American blight, and moss and lichen. It leaves the trees clean and bright. In bad cases of American blight and thick encrustations of moss on the trees, it is advisable to give the affected parts a preliminary washing with a mixture of soft soap, 4oz to the gallon of water, to which has been added a wineglassful of petrolcum. A considerable quantity of moss and lichen can be scraped off the trunk and principal branches with a piece of hoopiron before the washing.

CHECKING LUXURIANT FRUIT TREES.—The best time for root-pruning for the purpose of checking luxuriant fruit trees is early autumn; but circumstances frequently prevent the work being done at that period, and therefore a later time has to be chosen. The operation may be carried out any time during the winter when mild weather prevails and the ground is not too wet. From very early autumn pruning results may be seen the first season; but when carried out later this is not so apparent the first summer, but will show the result of the check the following season. There will be a less number of strong shoots produced, and instead of buds extending into wood buds they should plump up into fruit buds; at least, they will, under favourable conditions, show a tendency to do this, though it takes a time to transform an excessively luxuriant fruit tree to a fruitful one. It is not always advisable to effect the whole operation of root-pruning—that is, cutting the whole of the roots round the tree in one season, when the operation must necessarily be a severe one. It is better to do half one season and half the following, the method of root-pruning is as follows: Take out a trench at a moderate distance from the trunk according to the size of the tree or bush to be operated on. A distance of 3ft to 5ft is usually ample. Cut off all the strong roots found on the side of the trench. When reaching a sufficient depth undermine the ball and sever the strong descending roots found there. These are most frequently the cause of excessive luxuriance. The ends of all roots thus treated should be pruned smoothly. Fill in the trench again with good soil, making it very firm, and any fibrous roots which have been preserved should be laid out in it. On completion mulch with light manure.

TOP-DRESSING WEAKLY WALL TREES.—Wall trees often languish from want of additional support, either in the matter of soil or water. The nature of the support necessary may be ascertained by removing the surface soil down to the roots. If moisture is needed this will be apparent by the dry condition of the soil below, and much benefit will be derived from thoroughly saturating it with clear water, followed by liquid manure, before affording a top-dressing of fresh soil. If adequately moist below a good soaking of liquid manure will still be of benefit, adding much fertilising material to the lower roots. A good top-dressing of rich soil, consisting mainly of loam intermixed with burnt refuse, will form excellent rooting material for the young fibres near the surface. For stone fruit trees some calcareous material in the form of crushed mortar may be added.

PLANTING WALL FRUIT TREES.—Trained trees of Apples, Pears, Plums, and Cherries may with advantage be planted now. The soil should be deeply dug and enriched if necessary, rather with good loam and burnt refuse than manure. If the whole of the border is not prepared, the stations for planting the trees must be of ample size to accommodate the roots, as it will not do to cramp them when planting. They should be spread out to their full extent in shallow holes, covering them not more than a few inches. The trees must not be permanently fastened at this time, because they will sink with the soil. Lightly secure them now, and fasten permanently in spring. Apples and Pears may be horizontally trained, fan-shaped, and diagonal cordons. Plums and Cherries are more prolific as fan-shaped trees, also Peaches and Nectarines. These are readily replenished with young wood, while old material is easily removed. Thus a constant succession of suitable wood is main-

tained. Gooseberries and Currants grown on walls in cordon shape may also be planted now. Upright cordons are the best.—LYMINGTON, HANTS.

Fruit Forcing.

CUCUMBERS.—These like, and must have for healthy progressive growth, light, heat, and moisture. Keep the glass clean, both inside and outside. Add a little fresh soil over the roots as they protrude through the sides of the ridges or hillocks, using it sweet and warmed and moderately moist. A few sweetened horse droppings sprinkled on the surface of the bed occasionally will attract the roots, and supply them with nourishment, and a small handful of soot sprinkled on each square yard of surface will add colour to the foliage and fruit, afford nutrition, and be inimical to root pests. Afford water only when the soil is getting dry, then supply sufficient to moisten the soil through to the drainage.

Plants in beds of small area, boxes, and pots, should have liquid manure, always tepid, and not too strong nor too often. Damping the paths and sides of the bed and house will be sufficient to maintain a genial atmosphere, attending to it in the morning, and afternoon of fine days. Remove surplus fruits as they appear; also tendrils and male blossoms unless they are required for impregnating the fruit-bearing flowers. Stopping and thinning the growths will not be much needed, but it must not be neglected, as crowding is the precursor of evil consequences. Tie on the growths as necessary. Do not overcrop the plants, and be careful not to allow the fruit to remain longer on them than to attain a useable size; they keep fresh for several days after being cut if the heels are inserted in a saucer of water in a cool place, but safe from frost.

VINES—EARLIEST FORCED.—The Vines started early in November will now have their action excited by the development of the foliage, and great care is necessary to prevent a chill. The temperature about the pots of the earliest forced Vines should be kept steady at 70deg to 75deg, pressing down the fermenting materials and adding fresh as required. Disbud and tie down before the shoots touch the glass, not being in too great a hurry in staging. When two leaves are made beyond the bunch the laterals of Vines in pots should have the points pinched off when the leaf at the joint is the size of a halfpenny. Those planted in borders may be stopped three or four joints beyond the fruit, and then extend the growths so as to secure well-developed foliage all over the trellis. Remove superfluous bunches as soon as choice can be made of the best, under rather than over-cropping the Vines.

Maintain the night temperature at 60deg to 65deg, and 70deg to 75deg by day, with an advance to 80deg, 85deg, or 90deg from sun heat. When the flowers open keep the heat at 70deg to 75deg regularly, and maintain a rather dry atmosphere, and when the fruit is set return to the temperature before named. Artificial fertilisation should not be neglected, operating about midday. Afford liquid manure when the soil is moderately dry to Vines in pots, even when in flower, or always after they have developed the first leaves. Maintain a moist genial atmosphere by damping the paths two or three times a day, and occasionally with clear weak liquid manure. Houses with fermenting beds will not require any aerial ammonia.—ST. ALBANS.

Trade Catalogues Received.

Cooper, Taber & Co., Ltd., 90 and 92, Southwark Street, London, S.E.
—*Wholesale Seed Catalogue, 1902.*

Dickson & Robinson, Manchester.—*Seeds.*

Dicksons, Chester.—*Seeds. Potatoes.*

Henry Eckford, seed grower, Wem, Shropshire.—*Giant Sweet Peas and Other Seeds.*

Fisher, Son & Sibray, Ltd., Royal Nurseries, Handsworth, near Sheffield.—*Seeds; also Trees and Shrubs, Roses.*

Ed. Webb & Sons, Royal Seed Establishment, Wordsley, Stourbridge.—*Seeds.*

Gardeners' Provident and Charitable Institutions.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.—*Secretary,* Mr. G. J. Ingram, 175, Victoria Street, S.W.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—*Secretary,* Mr. W. Collins, 9, Martindale Road, Balham, London, S.W.

ROYAL GARDENERS' ORPHAN FUND.—*Secretary,* Mr. Brian Wynne, 8, Danes Inn Strand, London, W.C.

PUBLICATIONS RECEIVED.—“Gartenflora,” December 1: contains coloured plate of *Odontoglossum Wilckeanum*, *Rehb.* * * “Le Jardin,” November 20: coloured plate of *Begonia semperflorens* hybrids; and December 5 contains coloured plate of *Begonia erecta cristata* bicolor. * * “The Tropical Agriculturist,” November, 1901. * * “The Procession of the Months:” verses by Beatrice Crane; designs by Walter Crane.



RAMIE, OR RHEA FIBRE.—In answer to a query asked through the Journal by a correspondent on page 524, December 5, Mr. John Coutts, gardener at Killerton, Broadclyst, Devon, kindly writes: "Ramie, or Rhea fibre, is made from *Bœhmeria nivea* var. *tenacissima*. It is a native of Assam and the Malay Islands, and thrives only in tropical countries. On the other hand, *Bœhmeria nivea* has so far proved hardy in the south of England and is the so-called China-grass of commerce. It (*B. nivea*) has broad, heart-shaped leaves, downy white on the under side, whereas in *B. tenacissima* the leaves are green on both sides. In this country China-grass will produce one crop of stems per year, in a warmer climate two or three crops. So far as is known at present, "Ramie" from India has not proved so valuable as China-grass. The latter, when properly cleaned and prepared, stands pre-eminent amongst vegetable fibres for strength and firmness. A fine series of the prepared fibre can be seen in the Museum at Kew Gardens. Your correspondent can learn all about fibres if he care to get 'Commercial Fibres; their History and Origin,' by Dr. Morris, C.M.G., &c. late assistant director Kew Gardens. It is printed by Wm. Trownce, 10, Gough Square, Fleet Street, E.C., price 1s."

FORCED STRAWBERRIES (T. P. R.).—"Will you please tell me if Strawberry plants started now would produce ripe fruit about the middle of March, and what would likely to be about the price for the fruit then? In looking over old numbers of the Journal I do not notice market quotations at that time of year."

[Strawberry plants started now or at the new year will not afford ripe fruit until the early part of April, and only plants with well-formed and ripened crowns of the early varieties are likely to do it, such as *La Grosse Sucrée* and *Royal Sovereign*, the price ranging from about 2s. per lb, only fine fruit commanding higher prices. To ripen at the middle of March the plants should be started early in December, the fruit then commanding good and sometimes fancy prices, as much sometimes as 1s. per ounce; but at other times the price brought is not more than 5s. to 8s. per pound.]

STABLE-MANURE (H. B.).—"We have here the stable-manure from six horses, half straw manure and half peat moss litter. Would you recommend mixing it together, or keeping it separate? If separate, what crops would the peat moss be most suitable for?"

[It is advisable to keep stable manure when straw is used for bedding by itself, so that when rotted it can be used for mixing with compost for potting or dressing borders or even forming them. If mixed together, the straw manure and the peat moss litter manure, we should not care to use the resultant rotted manure in compost for potting plants or making borders, or top-dressing them, for plants and fruit trees generally, though it would be suitable for general manurial purposes in the kitchen garden and outdoor crops. By keeping the moss litter manure separate it can be thrown into a heap, turned as soon as in good heat, and when the heat subsides after turning once or twice add to it about one-tenth of air slaked chalk lime, and mix well. This will tend to correct any tendency to sourness, and the manure can safely be used for all kinds of flower, plant, fruit, and vegetable crops, especially those grown outdoors. It has particular fitness for light, sandy, or gravelly soils on account of its retentive power of moisture, and also in supplying humus.]

UTILISING STALE GAS LIME (R.).—"A large quantity of gas lime has accumulated at the gas house here. I would feel very thankful for your opinion as to its value as a manure, either as a top-dressing on grass land, or ploughed in for crops; and in what proportion it would be best to apply it. The land is light, on a gravel subsoil."

[The gas lime which has accumulated at the gas house will be valuable for mixing with compost in the proportion of one part gas lime to six parts compost, such as roadside parings, ditch scourings, rubbish from fields, &c., mixing evenly, and turning once or twice before applying to the land as a top-dressing, about twenty cartloads being applied to grass land per acre. Alone, it may be applied to grass land at the rate of three to five tons or cartloads per acre, preferably in the autumn or early in the winter, though it may be applied now, bush harrowing well in March, and rolled shortly afterwards. On arable land it may be applied at the above rates, and is preferably left on the surface a month or six weeks before ploughing in. If not used until spring, the lesser quantity should be applied, as the cropping will sooner take place. It is valuable for supplying lime, and is one of the best dressings for freeing the ground of various insect pests or their larvæ injurious to crops, and particularly so against clubbing in the Brassica tribe.]

CROTON LEAVES DISEASED (F. C.).—"Inadvertently the leaves (which we took to be a specimen for name, and had not read your letter) were placed amongst other matter that has since been cleared away. We regret the haste that has thus deprived you of what advice we may have had to tender; but if you can select another sample we will do our best to assist you."

CLEANSING TOMATO HOUSES (T. P. R.).—"With reference to your reply to 'Germicide,' in a recent issue (December 12), do you advise your formula for cleansing houses where all kinds of Tomato diseases have existed? We always limewash our walls. How would this be affected by using the iron sulphate solution, and do you advise applying with a brush, as with lime-wash? Recently I was given the following recipe for the prevention or cure of 'black-spot' in Tomato fruit: 'Dissolve 1oz of sulphate potash (liver of sulphur) in 1 quart of water, dilute with 2½ gallons of water, spraying the plants.' Do you know of its being of any good? Black spot is by far our worst disease here."

[Yes, we advise the formula given to "Germicide" for disinfecting houses where all kinds of Tomato diseases have existed. The walls would not be in anywise injuriously affected by using the iron sulphate solution—indeed, it is the old-fashioned wash used by housewives for house walls, with the addition of the sulphuric acid to render it more potent. It should be applied with a brush, as in whitewashing. The recipe for the prevention or cure of black spot in Tomato consisting of sulphate of potash and water is no use, only on the soil as a fertiliser; but 1oz of sulphide of potassium, commonly called liver of sulphur, dissolved in 1 quart of hot water, then diluted with 2½ gallons of cold water, sprayed on the plants at short intervals, coating all the surfaces, especially the under side of the leaves and eye of the fruit as well as the heel, with the finest possible film of the solution, repeated at short intervals, has been attended with good results as a preventive. Indeed, it can only act as a deterrent of the disease spreading, for there is only one cure—that of destroying the diseased parts by fire. In the case of young foliage the solution should only be 1oz of liver of sulphur to 6 gallons of water, as the stronger solution cripples the foliage and young fruit; indeed, it is safer to use a solution of 1oz. to 10 gallons of water, spraying at intervals of ten days to a fortnight.]

TREES AND SHRUBS FOR BOWLING GREEN BORDER (W. J. C.).—"What will it cost to plant a border round a bowling green? My committee only allow £7 for ornamental shrubs and trees and a few forest trees. The following is the measurement: 45yd long by 5yd, a sloping border 40yd long by 2yd deep, and another 42yd by 5ft; also the fourth side, 45yd by 5ft. The plants are to be 2ft and over. What shrubs would you plant to make it green and nice at the cost of £7? Please state the cheapest, and how many of each kind to fill the ground of a mixed collection; or how many of smaller shrubs, say about 18in, and what distance apart. The ground is rather exposed, but there is a wall 6ft high."

[In the border 45yd long and 5yd wide you may plant 6ft from the back at 12ft distance apart two Silver Birch, two Mountain Ash, two scarlet Chestnut, two Scotch Laburnum, two Siberian Crabs, and two Double Scarlet Thorns, all 6ft standards, costing from 1s. to 1s. 6d. each. Between these in the same line, Portugal Laurel, twelve bushy plants, 2½ft to 3ft, 12s. per dozen, and in front of these have flowering shrubs, such as *Berberis dulcis*, purple-leaved Berberry, common white and purple Lilac, *Ribes sanguineum* and its var. *albidum*, *Viburnum Opulus sterilis* (Snowball Tree), Golden Elder, *Weigela rosea*, white Broom, *Philadelphus coronarius*, and *Forsythia viridissima*, costing about 1s. each in good plants. These should be planted 6ft from the back row, 12ft apart, and between these, in the same row, *Aucuba japonica*, tree Box, *Cotoneaster Simonsi*, *Euonymus aureus variegata*, *Ligustrum coriaceum*, *Rhamnus Alaternus*, *Osmanthus illicifolius*, *Spartium junceum*, double-flowered Furze, *Laurustinus*, *Garrya elliptica*, eleven plants, costing 1s. each. In front of these, and 3ft from the middle row, planting quincunx or opposite vacancy, *Berberis Darwini*, *B. Aquifolium*, *Daphne Fioniana*, *Hypericum calycinum*, *Weigela rosea nana*, and *Genista præcox*, two of each, costing 1s. each. On the border 40yd long by 2yd wide we should have *Cotoneaster Simonsi*, 6ft apart and 2ft from the back, and 4ft from the back in front have *Berberis Darwini* in the vacancies, which will take twenty plants of each, costing 1s. each. The border 42yd by 5ft may be similarly planted with *Berberis dulcis* at back and *Berberis Aquifolium* in front, 22 plants at 6d. each. The border 45yd long by 5ft may be planted with common Laurel 2ft 6in from back 4½ft apart in the row, thirty plants at 6d. each, and these will soon meet and form a fine bank or hedge. All the shrubs except those of which the heights are given should be bushy plants recently transplanted, and 2ft to 2½ft in height. The cost, as foreshown, will be £5 to £7, but they may be had in plants under 2ft or even the sizes named for a little less. It is, however, false economy, and no satisfaction to the planter, to make use of cheap plants, it being far more satisfactory to secure hardily-grown and well-furnished, rather than drawn and weakly, plants at a cheap rate, they scarcely being worth the trouble of planting.]

STRIKING AND STOPPING MADAME DESGRANGE CHRYSANTHEMUM FOR FLOWERING THE THIRD WEEK IN SEPTEMBER (W. B.).—The cuttings should be struck in December, or not later than January, and the plants stopped for the last time at the beginning of June, though it is better to stop some plants about a fortnight later, it not being wise to depend entirely on individual plants when the blooms are required for exhibition, and it is also necessary to retard the bloom in an early season by placing in a south aspect, or in a late one on a south warm exposure, so as to have flowers at the time desired.

NAMES OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Somerset).—The larger Apple is Kentish Pippin, as you suggest; the smaller one is the variety Colonel Vaughan.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (H. F.).—*Chimonanthus fragrans*, about which we had a note recently. (F. S.).—1, *Adiantum hirtum*; 2, *Pteris argyrea*; 3, *Pteris Bausei*. (N. N.).—1, *Codiaeum* (Croton) *Reedii*; 2, *Toxicophlæa spectabilis*; 3, *Calathea zebra*. (Grower).—1, *Euphorbia jacquiniæflora*; 2, *E. splendens*; 3, *Cypripedium Curtisii*; 4, *Cattleya citrina*, flowering late. (B.).—1, *Begonia nitida*; 2, *B. fuchsoides*; 3, *B. manicata*.

Covent Garden Market.—December 23rd.

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz. ...	6 0	to 8 0	<i>Lilium l. rubrum</i> ...	2 0	to 2 6
Asparagus, Fern, bnch.	1 0	2 0	<i>Lilium longiflorum</i> ...	5 0	8 0
Bouvardia, white,			<i>Lily of the Valley</i> , 12		
doz. bunches... ..	6 0	8 0	bnchs	12 0	24 0
Bouvardia, coloured,			Maidenhair Fern, doz.		
doz. bunches... ..	6 0	8 0	bnchs.	6 0	8 0
Camellias, white... ..	3 6	0 0	Marguerites, white,		
Carnations, 12 blooms	1 3	1 9	doz. bnchs.	2 0	4 0
Cattleyas, doz.	8 0	12 0	„ yellow, doz. bnchs.	0 6	1 0
Chrysanthemums,			<i>Odontoglossums</i> ...	5 0	6 0
specimen blooms,			<i>Primula</i> , double white,		
doz.	1 0	4 0	doz. bunches... ..	6 0	8 0
„ white, doz. bnchs.	4 0	8 0	Roses, <i>Niphetos</i> , white,		
„ coloured, doz. bnchs	3 0	8 0	doz.	1 0	3 0
Cypripediums, doz. ...	3 0	4 0	„ pink, doz.	4 0	6 0
Eucharis, doz.	6 0	8 0	„ yellow, doz. (Perles)	2 0	3 0
Gardenias, doz.	6 0	0 0	„ red, doz.	0 0	0 0
Geranium, scarlet, doz.			<i>Smilax</i> , bnch	2 6	3 0
bnchs.	9 0	12 0	<i>Stephanotis</i> , doz. ...	0 0	0 0
Hyacinth, Roman,			<i>Tuberoses</i> , gross ...	6 0	0 0
doz. bunches... ..	8 0	9 0	Violets, single, doz ...	1 6	2 6
<i>Lilium lancifolium alb.</i>	2 0	2 6	„ double, doz.	3 0	4 0

Average Wholesale Prices.—Plants in Pots.

	s. d.	s. d.		s. d.	s. d.
<i>Aralias</i> , doz.	5 0	to 12 0	Ferns, var, doz.	4 0	to 18 0
<i>Araucaria</i> , doz.	12 0	30 0	Ferns, small, 100... ..	10 0	16 0
<i>Aspidistra</i> , doz.	18 0	36 0	<i>Ficus elastica</i> , doz. ...	9 0	12 0
Chrysanthemums, doz.	0 0	0 0	Foliage plants, var, each	1 0	5 0
Crotons, doz.	18 0	30 0	<i>Lycopodiums</i> , doz. ...	3 0	0 0
Cyclamen, doz.	10 0	12 0	<i>Marguerite Daisy</i> , doz.	8 0	10 0
<i>Dracæna</i> , var., doz. ...	12 0	30 0	Myrtles, doz.	6 0	9 0
<i>Dracæna</i> , viridis, doz.	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
<i>Erica gracilis</i> , doz. ...	10 0	12 0	„ specimens	21 0	63 0
„ <i>caffra</i> , doz.	15 0	18 0	<i>Primulas</i>	3 0	4 0
„ <i>hyemalis</i>	9 0	15 0	Shrubs, in pots	4 0	6 0
„ „ <i>alba</i>	12 0	18 0	<i>Solanums</i>	8 0	12 0

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	6 0	to 8 0	Lemons, <i>Mesena</i> , case	12 0	to 16 0
„ dessert	8 0	20 0	Oranges, per case ...	4 0	16 0
Bananas	8 0	12 0	Pears, English, $\frac{1}{2}$ sieve	0 0	0 0
Figs, green, doz.	0 0	0 0	Pears, French, crate...	9 0	12 0
Grapes, <i>Alicante</i> , lb. ...	1 0	1 6	Pines, St. Michael's,		
„ Colman	1 0	1 6	each	2 6	4 6
„ Hamburgh	0 0	0 0	Plums, $\frac{1}{2}$ sieve	0 0	0 0
„ Muscat	2 6	3 6	Walnuts, $\frac{1}{2}$ sieve... ..	0 0	0 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 3 0	Leeks, bunch	0 1	to 0 2
„ Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz	1 0	1 3
Batavia, doz.	2 0	0 0	Mushrooms, forced, lb.	0 8	0 9
Beans, French, per lb.	0 8	0 9	Mustard & Cress, pnnt.	0 2	0 0
Beet, red, doz.	0 6	0 0	Parley, doz. bnchs ...	2 0	3 0
Brussels Sprouts, $\frac{1}{2}$ sieve	2 0	3 0	Potatoes, English, cwt.	4 0	5 0
Cabbages, tally	1 6	3 0	Radishes, doz.	1 6	0 0
Carrots, doz. bnch. ...	2 0	2 6	Seakale	1 0	1 3
Cauliflower, doz.	3 0	0 0	Shallots, lb.	0 2	0 3
Corn Salad, strike ...	1 0	1 3	Spinach, bush.	2 0	3 0
Cucumbers, doz.	6 0	0 0	Tomatoes, Canary con-		
Endive, doz.	1 0	1 3	signment	4 0	5 0
Herbs, bunch	0 2	0 0	Turnips, doz. bnch. ...	2 0	3 0
Horseradish, bunch ...	1 6	0 0	Watercress, doz.	0 6	0 8



Live Stock Journal Almanac, 1902.*

There comes once more the old "hardy annual," and we accord it a hearty greeting. If say, thirty years ago, we had met with such a copy as is to-day presented to our notice, we feel sure that one of the first steps would have been to remove some of the plates for framing—we mean those early on in the book, the "Gee-Gees." We don't care quite so much about the horned stock, sheep, and pigs, but we do love a good horse, and it is a pleasure to see one, of whatever breed, well drawn. We know all horse delineators are not Herrings, but we do acknowledge that the horse finds some true lovers who really know how to place on canvas his beautifully proportioned frame.

The horse covers so much ground (no double meaning). We have big and little, the grand Shire and the tiny Shetland; the pure-bred racehorse, as fine as fine can be; and the equally pure but thick-set Suffolk. Ponies, too, appear as diverse in their breeds as do the other classes, and each class has its own votaries, unless we except Sir Walter Gilbey, who appears to hold a brief for all and each. One has only to read the Almanac to see how money can be and is made out of well-directed horse-breeding in any branch. But—and it is a great "but"—no book ever published yet will alone teach a man how to succeed as a breeder. We think it is Mr. Muntz who says a breeder requires (to do or be anything) a little money and a great deal of intelligence, and a sure belief in himself, we would add. All classes are bred by farmers, and we think, taking farmers as an aggregate, they are safest when posing as breeders of heavy horses. The reason is obvious, and we are quoting from a list of opinions that are gathered together in this book. Some of the writers are known to us personally, and we say "hear, hear," to their very practical suggestions. One breeder says: "It is from the farms we must look for the best horses. They are the proper breeding places, not the big studs." We think, ourselves, there is less mortality among the farmer's stock, but, alas! we have seen great loss both in the studs and on the farms.

The same writer puts his finger on a weak place—i.e., lack of interest shown by the foreman and waggoners. We know for a fact that some foremen and some waggoners not only do not like breeding mares, but go so far as to defeat the best intentions of their masters. Then, again, many a foal is lost, and mare often too, from unsuitable work during the months of pregnancy. Work is the finest thing in the world for a mare in foal, but she won't bear "ramming" about and abusing. On some farms the great object in view is to get the work done; never mind the ultimate fate of the tools.

All the writers fully concur in saying that there is a most appreciable improvement in Shires throughout the country. The demand for both home and foreign is increasing, and there is much money in it. One factor in the improvement is the multiplication of clubs for the hire or purchase of good, sound sires; and the great London Show has given an impetus to the smaller exhibitors now to be found so widely scattered over the country. One club mentioned did not hesitate to plank down £1,000 for the hire of a sire for the season. These men had the courage of their opinions.

Farmers are advised to sell their foals, thus saving themselves future risk and expense, and we should advocate this on those farms where good stock can be bred, but not so easily reared. It is not all land that is calculated to grow great, good town horses. Professor Axe contributes a useful paper on some of the habits and vices of horses. Some vices appear inherent, others again are the result of injudicious management. We spoke in the spring on the value of the example of good farming set us in the highest quarters, and we agree with all Sir Richard Green Price

says as to the beneficent influence Royal patronage has had on all subjects agricultural.

"Irish Hunters," by T. S. Smith, would be nice in a pamphlet to itself. It is not only most instructive, but amusing, and he highly condemns those hunters with a cross of common, heavy type blood. It used to be said, in a county where we hunted, that in a fast thing such a horse, after the first field or two, began to inquire who his father was! We also agree that such horses as two-year-olds are good to sell; they fill the eye, and many carry well those ardent sportsmen who prefer the safety of the roads and eschew fences. "Saleable Horses" (Vero Shaw) resolves itself into this: The best of its class, and if anyone will tell us what to do with the inevitable "misfit" we shall be glad to hear from them. N.B.—There is not often a "misfit" among Shires—there is always a job for him!

Now, then, for Hackneys. Some farmers have got the knack of breeding these to a useful profit, but these men stand out head and shoulders above their fellows. The best sires, so far, have come from the farm. Ponies (says Mr. Hill) have got an impetus from the increase of the game polo; in fact, the polo pony is a distinct type, but, as far as we can read between lines, the authorities don't yet quite agree as to the surest way to breed a good polo pony. There has been a good bit said about "remounts," and Lord Arthur Cecil is trying to utilise the New Forest pony for this purpose. We have never heard before of the little Shetland being used in the business of bottle and cask delivery, but Mr. Duncan assures us he has nothing else, and that three Shetlands can be kept at the cost of one horse. We know ourselves from experience what an immense quantity of work a pony will get through without being "sick or sorry." No horse is of any use without good feet. Begin at the bottom. It is all very well the good display a hunter may make at the summer shows. We judge of him by his performances in a long run over a stiff country.

Mr. Sheldon is very amusing over his cow paper. Poor old cow! how she has been maligned; such a weight of offences laid on her broad back; and she remains placid through it all. Mr. Sheldon expresses his opinion that the dairy cow has improved immensely during the past century. "Gradually the average cow is getting nearer to what the best used to be in yield and quality of milk." This is a hopeful sign, and we need not be so put about re Mr. Hanbury and his standard. Shorthorns (says Mr. Thornton) have been satisfactory this year, notwithstanding the stoppage of South American trade. Animals have been sent to Russia—some to Siberia, where already good stock is being raised. Germany, too, wants Shorthorn bulls, and we hear Mr. Dudding's Victor went to Schleswig-Holstein for 450 guineas. He is intended for the use of a village club or association.

Some bulls and heifers have gone to Australia, others to New Zealand, two to Japan, and one bull to Siam, with twenty-five to South Africa. Bates and Booth are getting well disseminated. We wonder what the originals would say if they could come to life again. What would the Collings brothers think? Hereford breeders have reason for satisfaction. There have been many triumphs in the prize ring, sales have totalled up well, and the export trade has been most satisfactory. These animals, against which the Argentine ports were closed, have found a home in the U.S.A. One fact about Herefords we learn for the first time, and it is that as a breed they are entirely free from tuberculosis. That is a good point in their favour.

Devons have had a quiet year, and the one remarkable feature was the good sale at Capton, Williton, when Mr. Bowerman's herd was brought to the hammer. Many of this herd went to South Africa. Time and space fail to mention the salient features of other noted breeds. We must go on to the sheep. There are two unfortunate factors at work. Wool has been almost unsaleable, and the foreign ports were closed against us. These two things spell heavy loss to sheep breeders. When work will get up no man living knows. We hope that next year the export trade may be as brisk as ever. We must not import disease from Canada, and it would be very easily done. We have been clear of "Foot-and-mouth" since April, so we may reasonably hope we are done with it for the present.

It appears we send sheep to Argentina, Canada, Germany, U.S.A., Chili, Uruguay, France, Russia, Australia, Cape Colony, and New Zealand, so we have a big market. We do not like to think of this autumn's ram sales; the price list

is not pleasant reading. It is a curious fact that anyone who is interested in Leicester sheep will find the principal prizewinners hail from the E.R. Yorks. There they are grown and "done" in perfection. The Leicester goes to France, as that cross is found so to improve the native sheep. No sensational prices for Lincolns this year—all very quiet. We have only just glanced at the sheep. There is a pig article, one on poultry-keeping, on spaniels at work, and the last, by Mr. Edward Brown, on the laying qualities of fowls. There is a mass of useful information, lists of fairs, societies, and the like, with a breeding directory. There is something for everybody, and the something is very good. We commend the volume to our readers most confidently.

Work on the Home Farm.

The great majority of farmers must be very thankful that they have their winter work so well in hand, for this is the second successive week that the results have been almost nil. The tempests of wind, snow, and rain have not only effectually prevented all work on the land, but left it in such a state of flooded soddenness that some time must elapse before we can get ploughs again to work.

We are still sending Potatoes to New York, but get on slowly with the sorting, there being so many blank days. Even with every device in the way of shelter, women could not be expected to kneel at Potato sorting in the open in such weather as we have just experienced.

As we expected, there has been a brisk trade for good Christmas beef, but the sheep trade has been bad. An instance of the wisdom and profit of early maturity was provided the other day by a farmer making 57s. 6d. of some cross bred hogs, 4s. per head more than the highest priced wethers in the same market. Old ewes in fair condition were sold at the same place for less than 40s. If these ewes had been fed up they might have made 45s. in February; but the cake bill would have conferred more benefit on the tallow chandler than on the meat buyer. It is more than ever plain that the cake must be given to the young growing animals, for it is their flesh which sells best in the market.

Breeding ewes must be well treated from now until they lamb. The earlier period did not matter so much; an ewe will stand a good deal of rough treatment in autumn, but if she is to produce one or two good lambs and nourish them quickly into saleable condition, she must be well fed now, and have some meat on her back when she lambs down.

We feed our hens well, but they do not lay, and eggs are 2d. each. All kinds of table poultry have been very dear this Christmas, but especially ducks, which have been fetching 8s. to 9s. per couple in the country. What must the price be in the towns?

Fat pigs are making up to 8s. per 14lb, and there is no supply at the price. This is the result of a failure of the American product. Will the same thing happen some day as regards Wheat? A farmer who has a few old hams left tells us that a traveller offered 1s. 1d. per lb for them to sell again. The retail price here must have reached 1s. 6d. Townspeople who have to pay such prices will think farmers are coining money. It is natural they should think so.

Agricultural Education in America.

This is the title of a 16-page pamphlet by Prof. John H. Wilson, of St. Andrew's University, Scotland, who made a tour in America last year. The text is based upon this tour across the States and the Dominion of Canada. It is a concise summary of the existing conditions.

A Champion Crop of Roots.

At the Scottish National Show held recently, Captain Stirling, of Keir, won first prize in the open class for Swedes with a superb sample of Messrs. Laing and Mather's Springwood Purple-Tops. In this connection it may be noted that, in the recent field Turnip competition held under the auspices of the Stirlingshire Agricultural Society, and open to the counties of Stirling, Dumbarton, Kinross, West Perthshire, and West Forfarshire, there were fifty-six entries, and Captain Stirling won first for Swedes, first for Yellows, and the champion prize for best crop. This champion crop, reports the "N.B. Agriculturist," was manured with 30 tons farmyard manure, 2cwt bonemeal, and 8cwt supers. One acre of the champion crop, after being topped and tailed, were weighed over the M'Jannet weigh-bridge, and they scaled 42 tons 3cwt. The crop was very sound and free from canker, and the judges affirmed that they had not seen so sound a crop for many a day. The Swedes were Springwood Purple-Tops, together with 3 acres of Teviotdale Green-Tops, and the Yellows were Messrs. Laing and Mather's Tweedside Aberdeen Yellows. These facts, together with the first prize won by the Keir Highland Steer at Smithfield this week, will serve to show that, although Captain Stirling is still at the head of his battalion in South Africa, his estate affairs are being well looked after in his absence.

